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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained many errors in authors' names, titles, and/or pages. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Elizabeth Toth, Historical Collections Preservation Officer; Maria Mazzola Parker, Metadata Management Librarian; Angela Cochrane and Cheryl Harling-Henry, Resources Division; Sarah Shields, Data Science and Megan Wolff, Services Division.

These documents were digitized in 2011-2012 and are available in the UM Digital Collections (archivesdl.umaryland.edu) and the Internet Archive (www.archive.org).

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1842

Author	Title
Smith, Washington A.	Chemical Causes Productive of Fever
Rudenstein, John	Tentamen Medicinus de Biliosis Remittente vel Febre Flava
Wilson, William Thomas	Pleurisy
Gore, William	Stricture of the Urethra
Harlan, R.S.	Gonorrhea
Newman, Casper M.	Koino-Miasma
Grimes, William H.	Fractures
Bordley, William W.	Menstruation
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Gross, Henry	Lithiasis
Gray, Benjamin R.	Hysteria
Pye, Edward Arell	Intermittent Fever
Larsh, James C.	Digitalis Purpura

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Author	Title
Guidry, Alexis O.	Yellow Fever
Mulliken, James McElderry	Diaphoretics
Stuart, William W.	Cynanche Trachealis

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UNIVERSITY OF MARYLAND

THESES

1842

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Wilson, William Thomas	Pleurisy	35p.
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1842

A Dissertation

On the Chemical causes Productive of Fever,

Submitted to the Examination

Of the

Provost Regents & Faculty of Physic

Of the

University of Maryland

For the Degree of Doctor of Medicine

By

Washington A. Smith

Of

Virginia

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1885

A Dissertation.

On the Chemical Influences, Productive of Fever.

In the discharge of a duty which the charter of the University, and long custom demand of such as may be candidates for the degree of "Doctoris Medici." I have chosen for my inaugural dissertation, the subject which heads this paper.

In selecting this subject, one object, was if possible, originality, Feeling assured, a dull prosy treatise, from my pen, on any of the numerous diseases, functions, or structure of the human body, would but little serve to elucidate, that upon which so many, and so ably have written. Another, and to me, one of greater import, is the opportunity of submitting, some reflections which have occured to me, during my study of Medicine, to a Faculty, than whom none are more capable to judge.

In viewing the task before, I see its many dangers thick and prominent, I feel myself standing on the verge of dangerous grounds — of mistaking speculations and theories for facts.

But should this deter from the task? Are not the very leading and elementary theories of one school of Physicians of the present day, the very antipodes of the other? Do not one sect pronounce that as empirical, which the other term distinctive, and unfounded on reason? And has this not been the case from the time of Father Esculapius down to the present period? What innumerable phases the science of Medicine has been made to assume? Were I but to enumerate the various doctrines and the vague notions, that have been produced, and their many advocates, it would far exceed the limit prescribed to this paper. A consideration of these facts naturally suggests its self to the mind, that the basis upon which the superstructure of the Medical science, was founded by the ancients, could not have been firm and philosophical; nor was their singular and fancied notions in the existence and governing principles of life in the humours, which have long since exploded, But may not the Moderns, even with our wonderful discoveries in Anatomy and Physiology have erroneous notions? How else are to be accounted for the paradoxical principles given to

the fundamental laws of the science? by different theorists. Why so often this revolutions in opinion? Have any of the doctrines, which now sleep in oblivion correct? Being the case at the present moment, and we find ranged on either side, men of acknowledged, worth, genius and talent; men conscientious in their motives and ambition; battling strong and determinately, for principles, which in fact are the very opposite. Both cannot be correct, and time must decide, which will go "down to the Capulets". What might be suggested from these facts? Would it not be in reason to say, that the healing art, has yet much to be added, to perfect it, as a science?

But to my subject — The cause of Fever, the better to be understood, it will be necessary, to look to this machine, man, both in anatomical and physiological lights; Truly the poet hath said,

"We are fearfully and wonderfully made".

In the osseous system of man, the skeleton, we see the most admirable, arrangement, for which nature intended it — in every point, strength, locomotion and beauty. But when we look into the texture of ours substance and essential to life, their structure, functions,

and harmony, we are astonished, each and every organ performing its assigned office, faithfully. We know that it is indispensable to life that ~~that~~ each organ should to act. We know also to a perfection, and harmony of these actions, man must be placed in a certain condition. We find for a perfect state of these things, he must be placed in a certain atmosphere, in a certain temperature, and receive nutrition from certain, alimentary substances. And an attempt to ~~xxxxxx~~ to remove him from this condition of things, without interfering the proper offices of the functions of life, would be as useless as the effort, to give motion to the steam engine, without the aid of water or caloric,

I then first propose to take up the digestive process. From experiment it has been proven that man as all animals requires, a peculiar and combined aliment, to sustain life. Nor does all alimentary substances possess, the nutritive principle in the same degree, the diversity and multiplicity of the aliments, is then an important rule in Hygiene, and in this the precepts of the science, agree perfectly with our instinct, and with the variations

brought by the seasons in the alimentary substances offered us by nature. Experiment has also proved, that substances such as sugar, gum, oil, and fat, into the composition of which no azote enters cannot suffice for nutrition, alone. The use of a certain quantity of azotic aliment, appears to be indispensable to animal life.

When the aliments to mastication, is submitted they imbibe Saliva, and are even sometimes dissolved in it. From thence the food passes on to the stomach, by the act of deglutition. In this organ the stomach, is the most remarkable phenomena of digestion, the transformation of the aliments into chyle. The walls of the stomach are very extensible: When its cavity is not filled with aliment they contract, and there is upon its internal surface a multitude of folds. We also see upon the surface of the mucous membrane which lines the stomach, a very considerable number of small secreting cavities, called gastric follicles, which pour out upon the aliments the liquor they secrete. This liquid, the gastric juice, is one of the most important agents of digestion, as by

Among all the sciences in the Schoolmen's philosophy, Ethics alone is by Aristotle. Schoolmen have so proceeded that their ethics are by them, and their ethics, while the consideration of which the agent matter cannot suffice for Institution, alone, the use of a certain practice of superior rational, affirmed to be an immediate of immanent life.

Then the Schoolmen to Aristotle, in subjecting their ethics Science, as it are, some constituent discussions in it. Among the first of them are the Aristotelian in the sense of superstition. In this by the Aristotle, in the moral immediately the immanence of imagination. The second consideration of the schoolmen into ethics. The work of the Aristotle are very substantial; Then it-greatly in such fitness with schoolmen. They contrary, as the Then is upon ide-ne-tional analysis or immediate of fitness. The clear are upon the analysis of the Nicomachean Ethics which Aristotle, a long consideration immediate of Aristotle as being Greeks, which a matter fitness which from and upon the schoolmen-The difference the arrange. This difference. The fitness, is one of the moral immediate of work of Aristotle. So in

its action the aliments are converted into chyme. When the stomach is full, it always flows in abundance, very marked with acid qualities. This acid is said to be due in part to the free, hydrochloric acid, and partly to the presence of a peculiar substance met with in the milk, and is called the lactic acid; also some salts may be detected in it — such as the marine salt, phosphate of lime, etc. — (See Edwards physiology — Page 12))

Very different theories are entertained, as to the causes of the transformation of the aliments into chyme in the stomach, But the one now most received and confirmed by experiment — is (I believe?) that the aliments undergo, a chemical change by the action of the gastric juice? That portion of the alimentary canal, termed the intestines. The food now penetrates, after its digestion in the Stomach. The alimentary matters after passing the pylorus, are mixed with humours, secreted by the intestine, and with two peculiar fluids — the bile, and the pancreatic juice, each formed by distinct glandular bodies in the region of the stomach, The Liver which is the productive organ of the bile, is the largest viscus

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of the body, an its office an important one. The bile is a viscous, ropy liquid. Its chemical composition is very complicated,— innumerable compounds enter in the formation of this secretion. It is always alkaline and has some analogy to soap. Its quantity appears to be regulated by digestion; for when the stomach is empty the gall-bladder is full, and when digestion is terminated this reservoir is nearly empty.

The pancreatic juice is very analogous to the salivia, both in physical properties and chemical composition. During the passage of the aliment it receives the bile, and other humours in its course and gradually changes its properties; it becomes yellowish, bitter, loses its acidity, then becomes alkaline, and at the same time, there is a matter separated from it, more or less thick, white or gray, according to the nature of the aliments, from which it arises, which is attached to the internal surface of the mucous membrane of the intestines and which bears the name of Chyle. This matter is absorbed until the inferior third of the small intestine, after which it is no longer found, the residue of the alimentary matter passes on, as is thrown of

es of excrementitious matter, digestion is then finished in the small intestines, and during its performance various gases are disengaged, from the alimentary mass. "These gases, (says Edwards) are principally Carbonic acid, and pure Hydrogen". Does this not favour the conclusion, that digestion, is effected through the action of chemical bodies, brought in contact, during the process of chymification and chylification?

To terminate the study of this function, it remains but to follow, the chyle, through its course into the conversion of blood. The chyle is absorbed by an innumerable number of vessels called lacteals, from the lacteals, through the mesenteric glands, and after issuing from these glands. They unite in one common trunk, the Thoracic duct. This duct traverses the the diaphragm, and mounts in front of the vertebral column, to the base of the neck, where it finally terminates, in the left Subclavian vein. The properties of chyle, vary with the nature of the food, It is usually a white liquid, opaque, of a salt alkaline taste. Examined by the microscope, it presents, multitudes of globules, analogous to those forming, the central nucleus,

of the globules of blood, when it rest it soon forms a crust like the blood, and separates in three parts like the blood, the chyle also takes during coagulation, a lively rosaceous tint and if agitated with oxygen the phenomena is yet more marked,

The chyle thus mingling with the blood, serves to repair the losses experienced by this liquid, or the organs nourished by it. But how is this transformation in the chyle effected? We have seen how to take in to view another great agency, in the modification of chyle in to blood, — the atmosphere, this acts upon the chyle and blood in conjunction, in the lungs, and is termed respiration.

This phenomenon is one of the most universal in nature; the contact of air is indispensable to all animals, and a living being deprived of it always dies. Wherever there is life, air is necessary. Air then we know is essential to the life of man. But this fluid is not a homogeneous body; chemistry has demonstrated, in it, the existence of two different elements, and which cannot consequently take the same office in the performance of respiration. Besides the watery vapour, with which the atmosphere is always more,

or less loaded, the air furnishes by analysis, twenty one hundredths of Oxygen, and seventy nine hundredths of Nitrogen, as well as traces of carbonic acid gas. The first question, which presents itself, to the mind when we study the action of respiration, is to know, whether these different gases act in the same manner, or if, to one particular belongs the property of sustaining life. Experiment, too has fully demonstrated this point. If a living animal be placed in a base filled with air, and all communication with this fluid with the atmosphere be intercepted, at the end of a longer or shorter period, the animal will become asphyxiated, and perish. The air then which surrounds it, has lost the faculty of sustaining life, and by chemical analysis, it is found to have lost the greater part of its oxygen. If another animal be placed in a jar filled with Nitrogen, it also perishes; whilst a third animal put into oxygen breaths with more activity than in the air, and presents no symptoms of asphyxia. It is evident therefore, that the atmospheric air, owes its vivifying properties to the presence of Oxygen, In respiration the air inhaled, greatly changes its composition. The oxygen disappears, and is replaced by a new gas.

carbonic acid. As to the Nitrogen of the respired air, its volume changes but little, and its principal use appears to be, to weaken the action of the oxygen, which in the state of purity excites animals too strongly and produces in them a kind of fever.

While the respired air undergoes the changes already indicated, the blood which passes over the membranes in contact, with this fluid, also experiences important modifications; it is <u>changed</u>, and rendered proper for the support of life — from a blackish colour, to a lively and sparkling red. Such are the principal functions of respiration, the great end to which, all and the actions and which we have rather minutely reviewed. From the moment the aliment enters the body, through the various processes in digestion, from food to chyme, from chyme to chyle, thence on to the <u>lungs</u> to receive the vivifying properties of the atmosphere, to become oxygenated, by a peculiar gas, the great end we say of this, wonderful and complicated operation, is the production of <u>Arterial blood</u>. Now for what uses is this fluid, designed which has been produced by this process? Surely nature would, not sacrifice her grandest design, but to a

a noble, and important purpose? Nor does she!!! We know that arterial blood, is the agent of nutrition, that it is distributed to every organ of the body, and without its action, life must cease, — it is life!!!

The influence of blood upon nutrition is easily demonstrated. When the supply of this liquid to any organ is obstructed, it is seen to diminish in size, and almost diminish to nothing. On the other hand, the more blood the function of any organ, demands, the more will it increase in size. The dancer for instance, the muscles of whose leg, the calf especially acquire a remarkable size. Whilst men as the blacksmith, who labour with their arms, the muscles of the superior extremity become more enlarged than any other parts. It is also known that blood serves not only to repair losses in the living organ, but produces in certain parts an excitement, without which life could not be maintained. It is thus seen that every organ in the human body, does, and must receive a quantity of this liquid, to enable it to discharge the functions, for which they were designed, and thus form, a link in this wonderful, being man the master piece of the great first cause.

We have seen how, the indispensable offices of this fluid, arterial blood; and the intricate and complicated process by which it is produced. We have seen that to the healthy production of this fluid, it is essential, that there must exist a perfect harmony of action, in the various organs. That this perfect harmony ~~[illegible]~~, is only kept perfect, by adherence to certain laws which regulate the animal economy. Now a breach of those laws, no matter, which way they may be broken, We think, will cause, and be productive of disease?

The principal causes of disease, we think are — physical disorganization by ~~[illegible]~~ blows or wounds — an improper, and improper aliment, and a vitiated and poisonous atmosphere,

We propose, taking up these three causes separately, and pointing out disease as produced by each one. If I take mistaken views, of my subjects I hope to be corrected; and if my grounds be false ones, I can conscientiously say, they have been adopted, after maturely and deliberately considering, the subject upon which I have ventured to give them.

The first among the causes we enumerated, was a "physical disorganization". We mean by this, when any part of the animal apparatus, has become, so destroy'd as to not be capable of performing the duties assigned to it, As for instance, an individual is thrown from a carriage, the wheels of which passes transversely across the body, in the region of the Kidneys, The violence of the pressure, or concussion is so great, as to materially injure the structure of these organs: The consequence is, their secreting power is suspended, the urine, which it was their office to have secreted from the blood, is not been taken off, but left to go the round with the circulation, the urine now becomes an irritating matter in the blood, In the course of the circulation, this poisonous substance which should have been thrown off by the Kidneys, is a cause of irritation, to every organ in the body, as of course it must come in contact by its being impregnated in the blood, Here then we have a disordered action throughout the whole system, produced, by a chemical attraction in the blood; a change, which has rendered it unfit, for the high offices for which it is intended, and which must inevitable lead to a disease, terminating in death,

unless a more fatal issue, inflammation supervenes, and mortification, hastens to close the scene, and abridge the painful sufferings, which sooner or later, would only cease with life. The question might be asked — does not such injuries always prove fatal through inflammation and mortification? I would answer the question by asking — if such wounds did not cause death by inflammation and mortification, could the individual live, in this condition, with this vitiated fluid circulating through the system? Could any important organ in the body, thus totally destroyed in action, be otherwise than fatal?

We will now consider, how death is caused through inflammation, in the injured organ (the kidney) The organization of the structure has been more or less destroyed, the supply of arterial blood has been interrupted, (we are speaking of the blood sent to supply the organ with nutriment, not the actual upon officially) The capillaries become congested, the nutritive qualities of the blood is changed, and from healthy, by its remaining dormant, becomes foreign, and irritated, causing irritation, and what is this but the first step of inflammation? If this can be arrested, allay well as regards this cause. But who

will say it can be,? when two such powerful causes are to be contended with? An unhealthy state of the blood by the presence of the wine — and dormant state of the capillaries, congested with blood rendered unhealthy, by its dormant state. This irritating matter continuing to act, produces inflamation in the part, from then on through the different grades to mortification, which soon extends its fatal ravages to adjacent parts, and death triumphs. Now in either cause it appears to us, there must be chemical attraction in the blood; in one we know there is a matter, which must exert a poisonous effect by its commingling with the blood, — in the latter, evidently, the irritation must be caused by some substance of a poisonous nature, and we have any reason to believe inert coagulated blood had such qualities.? Why does the Surgeon so carefully cleanse the contused wounds, or remove dead and lacerated parts, but to avoid the irritation they would cause, and its fearful results.? We believe it is acknowledged by all, that dead animal matter, by its decomposition is peculiarly poisonous; and in its decomposition evolves a poisonous chemical virus, of powerful malignancy,

But to the causes of Fever. They may we think in their various forms be produced, by an altered state of the vital fluid; — and this changed state of the blood may be occasioned, by different causes, viz — an unhealthy diet; a deranged state of the digestive apparatus, and a vitiated or malaricing atmosphere. Now we know it is indispensable, to the production of pure and healthy blood; (and we have seen how important it is, to health that this fluid should be pure,) that man must be placed where he enjoys, the very opposite to this to be in health.

One of the most common causes of Fever we believe is <u>Malaria</u>. The existence of this gas has never as yet be proven by chemical tests, and therefore has been denied by some; But proofs undeniable, and uncontrovertible can be adduced to prove that the atmosphere is, at certain times and places loaded, with an impure matter, and the inhalation of such a vitiated air, will produce disease, — in the form of Fever, of various grades, types, and malignancy, according as this poison, may in a more or less quantity be present, and by

by the State of the constitution, and the influence of other adjunct causes; each one of itself, in a measure, removing the system from its proper sphere, in which it would in health be placed.

The decomposition of vegetable matter, in large quantities, with the heat of the solar rays, is the most prolific source of Malaria, and consequently of Fever. The most sceptical on this subject might have been thoroughly convinced of the existence of poison and its cause by, having witnessed the appearance of an epidemic Intermittent Fever Jefferson County Virginia, in the autumn of 1836. I recollect well, the effects of this fever, and I believe I know beyond a doubt its cause.

Jefferson County Va, is pleasantly situated in the great valley of that State. The soil is of an excellent quality, and the climate healthy, but its inhabitants are subject to diseases common to the American climate, without any one being endemic to this county.

The spring of the year 1836, was a delightful one, the vegetable world had put on its lovelier garb; the grain fields were luxuriantly carpeted

in the deepest green, and promised to the farmer a rich and abundant harvest, But alas! alike too often man's fondest hopes and anticipations doomed to be disappointed.

In the month of May, commenced a rainy season which, for length and a steady continuance of the fall of rain is unparalelled in that state. For a period of seven weeks, it was asserted by such as observed, that rain fell every day. This occurred at the season when small grain was just what is termed "in blossom" — that is when there appears on the ear or "head" a light yellow downy substance. This "blossom" was destroyed, and the "heads" of wheat and rye was consequently not a fifth filled, as they would, had it been seasonable. Hundreds, yes I may say thousands of acres were left to rot on the field, not considered worth the labour of housing. After the cessation of rain, every place was flooded with water; the most beautiful fountains of pure and limpid water gushed forth from hill sides and tops. A heavy and rank growth of vegetable matter rapidly sprung up, and in a measure precluded the absorption of moisture by the sun.

of the soaked earth. In the month of September this vegetable matter began to fall to the earth and commenced decomposition, this went on rapidly; and from this state to I may say putrefaction; for I well recollect the appearance of the weeds, — the lower branches appeared to be coated with a stinking mucous, which emitted a very disagreeable sickening odour. Conjointly with this, the autumn was remarkable warm, the Sun almost oppressive in the meridian of the day, with cool nights. It is easy to foresee what would be the result of this state of things. — Intermittent fever began to effect some persons — a disease I will remark, very rare, and rapidly became general, and prevailed as an epidemic, I know of no one who escaped its baneful attack, I myself was under its influence, and my memory is void of the first attack.

The general treatment was, a pony of Sulphate Hydrarg. followed by oleum Ricini, to evacuate the bowels, followed by Quinine, though in some obstinate cases, this failed, and the fever run down into the low typhoid form, and some patients were lost.

With the approach of winter and a cold temperature, the intermittent fevers disappeared, — the cause having been removed by the purification of the atmosphere.

But a singular and remarkable circumstance was the result of the rainy season of named, at a place or village in the extreme southern point of this county, Harpers Ferry. This town is situated at the junction of the Potomac and Shenandoah rivers, and has been selected by the United States government, as the location of one of the armories for the manufacture of fire arms, because at this place the Potomac has rapid falls, and affords a durable water power. For the more beneficial commending this water there has been thrown across the river, a powerful dam, which backs the water for some miles up the river. This in the usual autumns becomes much stagnated, or to such a degree that the surface of the water is covered with a thick green slimy matter which emits a strong rank odour; partly produced by this floating matter and the decomposition of vegetable matter accumulated in this pond, which is alternately exposed to the suns rays, then covered in water, by the rising and falling of the water in the pond,

Harpers Ferry is annually visited by the intermittent and remittent forms of fever caused by the Malaria thus produced, but most singular, the autumn of -36 came and passed, and the inhabitants of this place escaped the usual endemic. Now this readily be explained in this way: the heavy fall of rain had greatly swollen the streams in the interior and the river Potomac by these tributaries was kept far above its usual level, this prevented the formation of the slimy scum on the surface of the damned water, and the accumulation of vegetable matter in this pond — because it was carried off by the rapidity of the swollen river. By this occurrence, the cause of the endemic fever was prevented, and the village being situated on a very rocky promontory which rises to a great height, and is almost destitute of vegetable matter, this prevents a this place being infected by the Malarious influence which produced the epidemic in the interior of the county. The season of 1837 was an usual one in that region, the inhabitants of Jefferson Co. enjoyed a healthy autumn, but Harpers Ferry had their old visitor in the form of fever, of various grades,

Now why did a Jefferson Co, escape the fever, which prevailed universally the autumn preceding, and Harpers Ferry on its border, again have that which did not make its appearance in the fall of 37?
Simply we think because, in the one instance, the cause was not present that produced it, and in the second, the cause was again produced, and the fever was the consequence,

In this case we think the evidence of the epistaxis proved beyond a doubt, this could not have been the result of chance.

The question now arises how does this malaria produce fever? through which channel does it enter the system? We think through the lungs by inhalation, impregnating the blood with its poisonous, thence on through the circulation to every organ and fiber of the animal economy, By some it is asserted that the miasm becomes entangled with the saliva and is swallowed into the stomach, and establishes a primary morbid impression on its delicate mucous membrane It is further affirmed by some, that the initial symptoms of fever, point out the primary influences of the febric cause on the stomach,

It is asserted finally that the lungs are endowed with an inferior degree of sensibility, and that their sympathetic relations are by no means extensive, and that therefore, they are but imperfectly adapted for receiving and propagating morbid impressions from external causes. To reply to these arguments, we have but to revert to the physiology of respiration. We have seen how important it was that the atmosphere be pure, for every moment, it is requisite to animal life, that it should be inhaled in its pure state. But by inhaling this miasm, it passes into the lungs from thence to the current of the circulation. It is not probable that a sufficient quantity of this miasm could be taken into the stomach to produce disease. And as to the degree of sensibility in the lungs, we conceive it has no bearing in the case, for we do not believe that the action of the poison is exerted on the <u>nerves</u>, but that produces a morbid chemical change in the blood. For we have seen that it is as indispensable to life that the lungs should be supplied with pure air, as it is, that the stomach should receive proper and healthy food. For they both conspire to the same great end — the production of pure arterial blood, without

which the system cannot be maintained in a healthy condition, In this case we have an impure air, and by it disease is produced, Now is it not reasonable to infer, that the deranged state of the system, has been occasioned by a morbid change in the blood produced by this miasm, We have evidence, we may say indubitable, that this miasm is introduced through the lungs, and not through nervous influence, The experiments of Magendie in relation to putrid effluvia are conclusive, By exposing animals to putrid effluvia, some were found to suffer no injury from its inhalation, whilst others became rapidly emaciated in the course of of a few days, and died in a various periods within twenty days, When however the putrid substance from which these effluvia emanated were rejected into the stomach, no inconvenience was experienced by the animals,

It therefore appears evident to us that airform morbific agents act upon the system through the medium of the lungs, and it is we think extremely probable they pass into the current of the blood, and act primarily through the capillary system, We then must suppose the blood is altered in quality, and does not possess the principles for which it was intended,

With all the evidence we possess, therefore that the blood frequently becomes changed, Chemically or mechanically with substances of an irritating or deleterious character; then surely exists no reasonable doubt that fever must be the result of such irritation. Then we have this vital principal the blood, undeniable changed from its pure state, coming in contact with every organ, tissue, and fiber of the animal economy.

I then undertake from the foregoing observations, if they be well founded, to lay down the following conclusions in relation to the production of Fever.

First – Fever is essentially located in the sanguineous system, and consists of an altered state of this system. The blood being changed in quality, producing from a healthy to, and irritated action.

Secondly – This irritated action of the sanguineous system results from the deranged state of its vital properties.

Thirdly – That the irritation acts primarily on or through the capillary system.

Fourthly, That the deranged condition, or imperfect action of any organ, which will draw successively other organs within the sphere of morbid action, until the whole system thrown into excitement, will

Firstly, that the association be formally constituted under the Friendly Societies Act, 1875.

Secondly, that the Society should be managed by a committee of twenty members, consisting of the President, Vice-President, Treasurer, Secretary, Assistant Secretary, and Committee, three of whom should be a quorum.

Thirdly, that the Society should be managed with strictly Protestant principles, and that the President, Vice-President, Treasurer, Secretary, Assistant Secretary, and Committee, should be members of the Protestant Association, and have the Society's Rules, and the Protestant Association's Rules, and the Protestant Association's Rules, and the Protestant Association

produce and altered condition of the system; because the apparatus so peculiar, for the production of this fluid, has been thrown out of ballance, and does imperfectly its office, the consequence is, a morbid secretion, is established in the sanguineous system, which we, have said will produce fever.

Sixthly. That the various exciting causes of Fever, often, then those through the lungs, act primarily on some particular organ - or organs, thereby disturbing the harmony of the system, this disturbance involves the action of other organs, because it fails to do its duty, and sends its work unfinished to the next organ which, has materials forced upon it: of which it cannot take action upon, and its officials duties are interrupted, so the whole chain of harmony is broken up. Now what is it the organs of the body act upon: - The blood; now let us follow such a disturbance from some organ. - The stomach - it is deranged, not from fever, say some unwholesome aliment: it imperfectly does duty; The chyme, is not properly sent to the intestines; chyle, ~~now~~ cannot, now be formed of a pure quality, because, the article submitted for its formation is not offered, and the evil cannot

be remedied here, it passes on such as has been received, the absorbents take up the impure chyle. The glands cannot purify it; it is not their duty — they have not the power; the chyle passes on to the lungs via the heart. Now here is the great work shop of nature for the production of pure arterial blood; they can produce such a fluid we have seen only, by the action of certain laws, — a chyle of certain qualities, must be one the great adjuncts, in the process for the production of this fluid. Here in this case we have, one of the great ingredients at fault; the lungs cannot remedy it. It is like the manufacture of flour if the wheat is sound so will be the flour, but if not all his skill cannot, produce a sound article from an unsound one, so with the lungs. They possess no power beyond certain limits; and if an article is improperly submitted to them, so have they to send it out, — now this is the case, when improper materials are submitted for the production of arterial blood, — improper materials are supplied and impure produced. This blood so produced is sent off to every region of the system — of an impure quality, this at once must prove a source of irritation. Why? Because it

is not constitutes a property, its combinations, are not that which enters in to the formation of pure blood. It is changed chemically? or mechanically? just which you like. This then is again a source of irritation and again we have fever, through the same agency as when Malaria is the cause — the sanguineous system.

I think just as these causes exist, or act upon the system, just to that degree, will be the grade, violence, or malignity of Fever, — or this combined actions, or the constitution of the individual, As Malaria when not aided by other causes produces the simple remitting or intermittent fever, conform to this solar heat, and we have the bilious fever, or with Malaria an intense vertical solar heat, and that worst of the "ills flesh is heir too" is the result — Yellow Fever, these are causes from our impure air. Then again look, at the exposed, half fed, and half clothed, debilitated and worn down, army, what has been their scourge? — the low typhus, aliments, and the apparatus for sustaining the current of life, are both, impoverished and life, no longer to sustained.

1842

Tentamen Medicum,

De

Biliose Remittente, vel

Febre Flava.

Quod,

Annuente summo numine,

Ex auctoritate,

Academiæ Terræ Mariæ præfecti,

Nec non

Amplissimi Senatus Academici consensu,

Et doctissimæ Facultatis Medicæ decreto,

Pro gradu Doctoris,

Summisque in medicina honoribus et privilegiis

rite et legitime consequendis;

Eruditorum examini subjicit

Johannes Rudenstein

civis Baltimoriensis,

Marylandia.

Ad diem 15 Februarii, hora locoque solitis.

MDCCXLII. A.D.

Præfecto,
Senatui, Facultique Medicinæ,

In
Alma Academia Maryllandiæ;

Hoc tentamen,
Officiose datur, dedicaturque

Auctore.

Pentamen Medicum,
De
Biliose Remittente, vel
Febre Flava.

Tyro medicus pro these inaugurale, illud subjectum generaliter elegit; quod, in studiorum suorum serie, attentionem ejus particulatim attraxit. Nullus morbus est forsitan, qui generi humano fatalior fuit, Febre Flava; et quum hoc una cum phænomenis suis consideramus, morbus nullus aptior est, medicinæ tyronis attentionem attrahere.

Hic morbus quis semper tam hominibus fatalis fuit; tempore Hypocratis notus fuisse dicitur. Morbus est ardentium regionum, et generaliter in autumni mensibus, se manifestat. Regio ardens, origine suo indespensabilis est. Hic morbus in partibus omnibus terræ fuisse dicitur, ubicunque regio, origine suo favorabilis fuit. In India fatalissimus est.

Symptomata. — Hic morbus generaliter octo et quadraginta horis, cursum suum currit. Vertigo; doloris sensibilitas in dorso, lumbis extremitatibusque; languor et debilitas, cum algoribus, generaliter appropinquationis morbi, te admonent. Paucis, ad duodecem horas postea quam; reactio arteriarum magna, commitata cum cute arida, calidaque; oculis — rubris; capitis dolore magno; cruciata site; lucis intolerantia; in lumbis dolore; linguaque alba, his symptomatis succedit. Erga finem primarum quatuor et viginti febris horarum, aegrotus capit vomitare, particulatim post haustus capit. Ejectiones primo haustus illos constituunt, qui, in ventriculum capti sunt. Sed post hi vomitati, sæpe bilis, nigro coloris, quæ ora deglubit in abundantia vomitatur. Nunc magni sunt calor, ventriculi dolorque; et vultus miseriæ aspectum aspiunt. Magni sunt suspiratio, et anxietas; deleriumque generaliter —

supervenit. Hic paroxysmus, a quatuor et viginti, ad sex traginta horas, communiter durat; et tum omnia symptomata, cum nausea, atque vomitionis exceptione valde subsidunt: arteriarum pulsatione redeunte, ad naturalem velocitatem; et cute acquirente, conditionem humidam. Pars semifsio est magna, in exemplis quibusdam; ut agrotus pericula omnia, deferv escere credit. Sed saepe agrotus in insensibilitatis conditionem manet. Hac tranquilitas ominosa est; nam post paucas horas, ardens in ventriculo sensibilitas, cum violentia aucta redit. Vomitioni acrem, atque frequentem esse decet; et oculi, cutisque pectoris, nunc flavi sunt. Secundus paroysmus, a duodecem, ad sex traginta horas, communiter continuat; et tunc ordo symptomatorum novus, succedit; quis tertiam, vel ultimam morbi scenam notat. Arteriarum pulsationes, nunc

in frequentia, vi, magnitudineque de=
clinant; lingua nigra est; et vomitio fere
constans: ejectiones consistentes, materia
nigra, quæ vomitum nigrum constit=
uit. Extremitates nunc tenaces atque
frigida decent; et sensibilitas ardens, in
ventriculo, intolerabilissima est. Diarrhea
generaliter supervenit, et ægrotus sæpe
ventrem suum exonerare non potest,
potestatis defectione, in abdominis —
musculis. Superficies corporis omnis,
nunc flava est; et singultus, hæmorrha=
gia, violens delirium, insensibilitatisque,
materius, vel recentius, in morte, ægro=
ti perpessiones terminant. Talis cursus
communis est morbi hujus fatalis.

Diagnosis. — Diagnosis morbi
hujus propter ejus symptomata pecul=
iaria, non difficilis est. Sic auctoribus
illis describitur. — "Febris epidemica
autumnalisque, cum exacerbationibusque,
plerumque cum rigore redeuntibus,
constans; remissione quovis die evidente

interposita; aliquando cum flavidine cutis; anxietate maxima; nausea vomitique urgicante; hæmorrhagiis; et in paucis exemplis petechiis seu carbunculis?"

Morbi causarum. — Opiniones medicorum, de morbi hujus origine varia fuerunt. Sed hunc (credo) origo ejus, domesticam esse admittitur. Hæc opinio accuratam esse mihi videtur, a circumstantiis quæ sequuntur. —

I. — Febris-Flava semper in humilimis, atque impurissimis partibus urbium, se manifestat; et hi loci, in quibus, ea maxime prævalet, sunt in proximis vicinitatibus paludum, vel solorum, qua favorabilia malariæ productioni sunt.

II. Febris-Flava in tempestatibus frigidis, nunquam occurrit; gradus temperatura magnus, causa sua

generationi semper necessarius est.
III.— Pluviæ ingentes, et tempestatis frigidæ superventus, morbo finem facere nunquam difficiunt.
IV.— Febris Flava semper, et eodem tempore se manifestat; et cum febribus bilio sis remittentibus interniscetur.
V.— Origine malariæ remota, reditus morbi hujus prævertus est. Hoc factum, a malaria hunc morbum produci probat. Si hæc conclusio, de morbi origine, accurata sit; oportet nos aliorum opiniones rejicere, qui eum tabificum esse credunt. Ut hic morbus non tabificus est; certe maximum documentum habemus, a factis quæ sequuntur: Morbus ægrotorum nemini nutricium communicabatur, quum Philadelphiæ MDCCXCIII. A.D. prævalebat. Rush viris circumstantiam narat, qui post cum vomitu nigro se innoculaverat; morbus non

producibatur. Quum hæc febris Philadelphiæ MDCCXCIII. A.D. prævelebat; coffeæ putrida productus fœtor supponabatur, quæ super postibus urbis illius jactata fuerat. Hæc malaria in pulmones recepta, causam remotam constituit; causa proxima consistens, in intemperantia vel quocunque corpus excitare inclinationem habeat.

Pathologia.— Ventriculum, hepargue, organi sunt; super quos, hic morbus impulsionem maximam suam exerit. Præcipue ventriculum, prioris inflamationis, consecutionisque ejus; vestigia maxima semper ostendit Tunica densantur, et in partibus multis gangrenosæ sunt. Duodenum, cerebrumque, fere semper inflamantur. Hepar in casibus multis, conturbationem multam subit; illo, in conditione putrida, dissolutaque, invento.

Prognosis.— Forsan modus nullus

est, in quam, medici frequentiores contemptioni, cavilationique mundi sese exposuerunt, prognosi morborum. Opinionem positivam darent, morbi nulli eventui. "Nam in morbis acutis, (dicit Rush,) "Ubi vita finiat, ubique mors principium habeat; impossibilis est dicere. Aegrotorum centum sunt, qui post declarati incurabiles, dedecori professionis convalescerent?"
Plus periculum semper apprehenderetur, quum hic morbus, repente violentique, se manifestat. Febris major, dolores acriorsque, morbus periculosior est. Sed morbus multum periculosior est, si nullus dolor ab aegroto omnino experitur; pacipue eodem tempore si, eum in conversatione obligare difficilis est. Quum vomitus niger in abundantia occurrit, et quum debilitas magna est; morbum incurabilem esse declaremur. Sed quum exacerbationes maxime subsident, et perspiratio mite se manifestat;

opinionem favorabilem demus.
Secundum Potter professorem, ægrotus generaliter convalescitur, si quintum paroxysmum supervivit.
Curatio. — Secundum febris hujus pathologiam, inflamationis morbus est, et ideo tractaretur. Oppportet nos hepatis concervationem vincere; organi illius inflamationem, atque ventriculi reducere; et ventriculum intestinosque, illius oneris liberare, quibus in hoc morbo subjicuntur. Hoc venæsectione, purgatione, vesicatorii, vesicatorii applicationeque fieri est. Si in primo morbi hujus paroxysmo arcesseremur, et magna arteriarum actio est; sanguinem promeremus, donec et vis, et frequentia arteriarum pulsationum diminutionem habemus. Tum præscriptum daremus, quod sequitur:

℞ Hydrarg: Submur: grxii
Pulv: rad: Jallapæ grx
M. ft. Pulv.; quod repetendum est,

vel

℞ Hydrarg: Submur: grxii
Pulv: Gambogiæ grIII

ad intervalum horarum trium, donec faciem aspectum (quæ, in hoc morbo generaliter albæ sunt,) mutatur. Tum denique, magnesia sulphatis data in potionibus, quæ in laxa conditione intestinos servare sunt sufficientes; morbus si mitis in mite perspiratione generaliter terminabit. Sed frequenter actionem tardam, laborantemque arteriarum invenimus, quæ improspere debilitatis signum esse sæpissime considerantur; quum sane solum symptomatum congestionis est. Actio arteriarum generaliter in hac conditione augmentat, dum sanguis a venis fluit. Itaque semper sanguinem nobis promere decet; quum hanc rerum conditionem habemus. Si autem morbus conditionem severam assumit; commutatis cum delerio, vomitione magna, et doloribus severis in ventriculo; sanguinem etiam ad spatium unciarum centum promeremus; et

capiti glaciem, vesicatoriaque extremitatibus applicaremus. Vesicatorio ad epigastrii regionem applicato; dolor, vomitioque, subsidebunt. Lactis uncia dulcis, singulis horis data, idem effectum habebit. Si debilitas magna, cum arteriarum actione tarda, deliique supervenret; stimulos potentissimos nobis dare oportet. Saltem ægrotus, a morbi hac conditione, raro convalescet. Haustus frigidi in hoc morbo utilissimi sunt. Illi, dolores ardentes in ventriculo relevant. Porro enemata aqua frigida utilissima esse inventa sunt. Ægrotus quotidie cum aqua tepida, lavaretur; et munditia magna, observaretur. Emetica atque Tonica, tamquam Narcotica, in hoc morbo, non semper inutilia, sed etiam injuriosa inventa sunt. Venæsectio, Hydrargyrumque, in hoc morbo, sunt remedia suprema. Rush dicit; ut

illorum omnes, a quibus, sanguinem in hoc morbo promebat decem tempora; semper convalescebat?" Quum aegrotus convalescere cœpit; temperate vivere, et ad noctis aerem non se exponere, est omnis, ut necessarius est. Tonica quoque in hac conditione, injuriosa esse inventa sunt. Quum haec epidemica Philadelphiae MDCCXCIII. A.D. occurrebat; Rush primus fuit, qui eam, tanquam inflamationis morbum tractabat. Et centum, sub hanc exacerbationem medicalem convalescebant; dum millia sub tonicorum exacerbationem moriebantur. Tametsi ab medicis Philadelphiae omnibus, in primis opponabantur; nos emendate successum suum judicemus; quum invenimus, ut praescriptorum millia suorum, (formula cujus, jamdudum data est;) a medicamentariis omnibus in illa urbe quotidie vendebantur; et etiam medici, qui eum in primis opponabant;

denique exacérbationis modum suum adoptabant. Rush vere generis humani amator, in hoc morbo erat. Et quum in laborum ejus arduorum enumerationes examinavimus, in veritatem constituente; et quam succedebat, post tam multis periculis congressis; in Poeta lingua obligamur exclamare;

"Quæ te tam læti tulerunt
Sæcula? Qui tanti talem genuere parentes?
In freta dum fluvii currunt, dum montibus umbra
Lustrabunt convexa, polus dum sidera pascet,
Semper honos, nomenque tuum, laudesque manebunt,
Quæ me cumque vocant terræ!"

Finis

An
Inaugural Dissertation
On
Pleurisy.
Submitted to
the examination
of
The Provost Regents and Faculty of Physic
of
The University of Maryland
for
The Degree of Doctor of Medicine
by
William Thomas Wilson.

Baltimore Md.

Febry 21st 1842.

Pleurisy.

Pleurisy, from πλευρα the side may be defined "an inflammation of the serous membrane lining the thoracic cavity, and covering the lungs." The term was originally applied to every acute affection of the chest, accompanied by pain, fever, dyspnoea, and cough. But since the means of diagnosis have been more extended, and the pathological states of the different viscera more accurately studied, it has gradually become limited to its present signification.

Though frequently complicated with diseases of the lung itself, sometimes causing, and sometimes resulting from them, which perhaps may have contributed to its former comprehensive meaning it nevertheless often exists as an independent affection, and as such, deserves a separate consideration.

Even in simple pleurisies, there exist many varieties of specific disease, which of course require corresponding modifications of treatment for their cure. Thus, a pleurisy may be so slight as to affect only one circumscribed spot of the pleura, giving rise to a little pain only, and disappearing in a few days, without any injurious organic lesion; or involving a larger portion of the tissue either of one or both sides, partially, or wholly, may terminate in a deposition of lymph, the formation of false membrane and the effusion of serum. Either of these results again, may follow without the other, the Dry Pleurisy of authors, constituting

the disease when the effusion is wanting, and its presence, whether it be serous, purulent, or sanguineous forming Empyema. Besides being simple, pleurisy may accompany other diseases of the lung, being a frequent complication of pneumonia, sometimes though seldom, conjoined with bronchitis, and being excited almost always, in some stage or other of Phthisis. It may be combined with various affections of other organs, the most constant of which are pericarditis and inflammation of the liver. Again, it may be developed in a constitution worn out by excesses, confinement, a series of acute attacks of other diseases, or engraft itself upon a chronic affection of another nature. Of this kind were several cases which have occurred within the last year at the Baltimore Alms-House, and in which the disease supervened upon patients, debilitated by chronic intermittent fevers, a long course of dissipation &c &c. Generally however, the disease in its simple form, attacks the young and robust, giving rise to well marked and distinctive symptoms, and calling for a prompt and well directed treatment.

The symptoms of acute pleurisy have long been known, and Sydenham's accurate description of their invasion, has never been excelled by a more modern writer. "At rigore plerumque atque horrore, orditur quos excipiunt calor, sitis, inquietudo, et cætera febrium symptoma, plus satis nota. Elapsis pauculis horis (licet aliquando multum serius ingruat symptomata hoc) æger

vehementi dolore, eoque functorio, in latere uno alterutro, circa costas corripitur, nunc versus omoplatas, nunc spinam, nunc ex adverso versus anteriora pectoris, se propagat. Tussi etiam crebra afflgitur quae magnum adfert cruciatum, a partium inflammatarum contentione ortum, unde spiritum subinde reprimit, et prima tussiendi molimina exercet." The attack usually commences with a sudden lancinating pain, below the nipple of the affected side, extending sometimes behind, sometimes towards the sternum, and even across to the other side, sometimes beneath the axilla, and when the inflammation is confined to the diaphragmatic pleura, running along the cartilages of the false ribs towards the flank. The pain is increased by pressure, coughing, by lying upon the side, and by respiration, so that the patient instinctively restrains the movements of that side of the chest, compensating for its loss of action, by a proportionate increase in the motions of the sound side. This pain is always accompanied by fever, sometimes even preceded by a chill, but by no means so constantly as it occurs in pneumonia; the pulse is frequent and hard, the bowels costive, the skin hot and dry, the secretion of urine scanty, and high colored. Associated with these symptoms we have a hard, short, dry cough, and more or less dyspnoea; the respiration is hurried, and incomplete, the patient fearing to expand the lung, from the aggravation of pain, and endeavoring to make up for the deficient action, by its increased frequency. Though an acute attack of pleurisy

generally displays itself in this manner, thereby warning the patient of his danger, and leading to due attention and treatment; its approach is sometimes exceedingly insidious, and the individual may pursue his occupations, without pain, or cough, or perceptible fever, until the gradual accumulation of fluid at last produces, by its quantity sufficient suffering to attract his attention to his condition.

As the disease progresses, and after some effusion has ensued, the more urgent symptoms abate. The pain is diminished in intensity, and the fever gradually declines; the dyspnoea and cough alone either remain stationary, or become even more distressing.

The extent of the former is regulated, not so much by the quantity of serum effused, as by the rapidity with which it makes its appearance; the lung in the latter case, not having time to adapt itself to its new relations, nor the sound one, to assume the function of that which has been so suddenly compressed.

Simultaneously with the disappearance of the first aggravated symptoms, the physical signs develope themselves, and afford us both an exact and interesting means of estimating the nature and extent, the progress or removal of the various organic lesions.

Before proceeding with these however, in order that they may be better understood, it will be necessary to take a survey of the pathology of pleurisy.

The first known effect of inflammation of a serous mem-

brane, is a diminution of that secretion or exhalation, natural to the part in health, which lubricates its surface, and facilitates its motions. The pleura is then, in the incipient stage of an attack, preternaturally dry. The two surfaces move past each other, in respiration, harshly and with a rubbing sound. This diminution of secretion is soon followed by the other phenomena of inflammation: the capillary circulation is quickened and increased; vessels, before colorless, become filled with red blood, and a general increase of bulk, with an exaltation of sensibility occurs in the whole inflamed portion. The seat of this inflammation is referred by Williams and Law to the sub-serous cellular tissue. Andral also locates it, at the commencement, in the same tissue, believing that the proper serous membrane becomes afterwards involved; but Stokes considers it to be situated in a layer of the pleura, which he has himself discovered, a strong, transparent, fibrous membrane, immediately in contact with the lung itself, between it, and the sub-serous cellular tissue. After a short time, the inflammatory organism continuing, the diseased surface pours out an increased quantity of serum, and with it an exudation of lymph, but the period at which these phenomena occur, has been differently estimated. Laennec tells us that he has discovered the physical signs of effusion in one hour after the invasion of the attack, and has found the chest dilated, in less than three hours. Stokes regards the effusion as corresponding with the

diminution or cessation of pain, which commonly takes place at a period varying from forty-eight to sixty hours. The character and quantity of this effusion vary greatly in different cases. At times only a few ounces are found in the cavity of the thorax, and again it may be so extensive as to occupy its greater portion, compressing the lung to the size of the fist, or less, with every intermediate degree. Its quality is even more diversified. It sometimes resembles exactly the serum of the blood, sometimes becomes more opaque and albuminous, frequently with shreds of unorganized lymph floating in it, sometimes tinged with blood, or even consisting of pure blood, partly fluid and partly coagulated, again presenting the appearance of semi-fluid jelly, or finally becoming purulent. The lymph regulated by the previous health of the patient and the intensity of the disease, either floats unorganized, or perhaps dissolved in the fluid, or assuming vital properties, presents various appearances of interest. Its organization may occur either rapidly or slowly, sometimes becoming completely vascular and attached to the pleura in a day or two, and again remaining for months without form, attachment, or vitality. Andral discovered the existence of delicate false membranes upon the pleura of rabbits which he had artificially inflamed by the injection of acetic acid, nineteen hours after the operation was performed, and has also observed them in subjects, in whom the disease had existed but a few days. When first secreted, lymph is

a soft, yellow gelatinous substance, similar in consistence to the boiled white of an egg, or more nearly resembling the buffy coat which forms upon the surface of coagulated blood. Between the limits of time above specified, red vessels develope themselves within its substance; these vessels spread by radiating in all directions, and at last, anastomose with corresponding vessels of the true pleura, forming a complete and intimate union with it. The false membranes thus constituted, when covering the pleura, are usually of two or three lines in thickness, and sometimes exist to the depth of more than a quarter of an inch. They may present a smooth, uniform and polished surface, or being of unequal thickness, and interrupted extent, form an areolated structure, by various lamellæ crossing and intersecting each other; or they may exist in minute granulations, studding the whole surface of the inflamed portion. The pleura itself is rarely, if ever, permanently thickened; this appearance in all cases in which it has been met with, having been produced by the close adhesion of the superimposed false membrane. The disposition of these membranes, whether they shall form a lining for the pleura, or shall constitute cellular bands of adhesion between the two surfaces of the pleural sac is determined by the rapidity and quantity of effusion. If the quantity of fluid in the chest be considerable, and have accumulated rapidly, it separates the two pleural surfaces at such a distance from each other that the fibrinous exudation remains upon the spot, upon

products of inflammation, are deposited in the parenchyma of the lung itself, giving rise to no diminution of bulk, but consolidating the whole by filling up the open cellular structure, thereby gradually encroaching upon, and obliterating the vesicles. The former is in a measure extensible, if not elastic, and tears with difficulty; the latter is firm, unyielding, and breaks readily under the finger, with an uneven, granular fracture. As the disease yields to treatment, the effusion is gradually absorbed, and carried off by some of the natural channels, and the lung resumes its original bulk and functions. This, according to Laennec seldom takes place in less than a month, even in acute pleurisy, and more commonly not till after the lapse of two or three. When the disease becomes chronic, it may remain unabsorbed for years, the tendency to absorption being inversely as the duration of the effusion.

We come now to speak of the physical signs of pleurisy. These are more numerous and more satisfactory than in any other class of chest diseases, and are therefore the more useful, inasmuch as pleurisy more frequently assumes a latent character than any of the others. The first sign which can be detected by the stethoscope, and which accompanies the incipient stage of pleurisy, is a rubbing or friction sound, caused by the contact of two dry surfaces, such as in fact the two pleurae are in the primary stage. This however is obvious to the physician, only when called in immediately ~~after~~ upon the accession

clavicle. Dr Williams in his Lecture (Bell's Med. Lib.) has given some interesting drawings, illustrative of the effects of these adhesions. In one he displays the manner in which bronchial respiration and bronchophony may accompany a copious effusion, the liquid condensing and displacing the lung in every part except where it is bound down by adhesions, which still permit the voice and respiration to pass to the ear. In another, he exhibits the singular, and apparently perplexing phenomenon of absolute dulness from the second to the fourth rib, with amphoric percussion over the top of the sternum, and a feeble respiratory murmur below the fourth rib. These appearances were mistaken by him for pneumothorax, resulting from perforation of the lung, but he was afterwards undeceived, by discovering in a similar instance, one of these adhesions, existing about the middle of the lung, which prevented the gravitation of the fluid downwards, confined it around the roots of the great bronchi, and by condensing the lung above them, giving rise to the loud, tympanitic percussion, and peculiar respiration.

This array of signs, supervening on effusion, might be confounded with those resulting from pneumonia, but the dullness, and absence of the respiratory murmur are more complete, supervene more suddenly, are defined by a distinct boundary, and are unaccompanied by the crepitant rale. The dulness, again, changes with a change in the patients position; on leaning forwards, bending over with his head downwards, or lying upon his face, the fluid will gravitate to the most

dependents part, and that which was previously dull, will be restored to its natural sonoriety. Besides those which we have enumerated, another important sign of effusion at this stage is the loss of that resonance of the voice which is always transmitted to the hand applied to the parietes of a healthy chest. A layer of fluid interposed between the lung and the hand, destroys this vibrations, while a solidification of the lung itself only weakens, without destroying them.

The same amount of fluid which gives rise to dullness at the lower part of the chest, and mounting upward in a thin layer of an inch or two in thickness, also causes a singular modification of the voice transmitted through it. From its vibratory and tremulous character, bearing some resemblance to the bleating of a goat, Laennec gave it the name of egophony. It is always most audible about the lower angle of the scapula, but is not exclusively confined to that situation, being sometimes heard above, sometimes below, and occasionally on either side. He supposed it to arise from the tones of the voice being broken up by the character of the medium through which they were conveyed to the ear; the fluid is thrown into vibrations and transmits the voice in this tremulous manner, some notes being lost, and others conveyed with greater or less distinctness. This explanation of Laennec's has been generally adopted, but Dr Law (Cyc. Prac. Med. Art. Pleurisy) considers it as only another grade of bronchophony, and that its character depends, not upon any vibrations

in the transmitting fluid, but upon the physical changes produced by its compression, upon the tissue of the lung. Whatever may be its cause it is unanimously admitted to be a constant accompaniment of pleurisy, when the effused stratum of fluid is of a certain thickness; but its varying character, and close resemblance to bronchophony, combine to render it a sign of little practical value. Laennec considers it pathognomonic of the disease, but subsequent writers have not sustained him in his opinion. It is a useful adjunct to other symptoms, but of itself would scarcely entitle us to make a positive diagnosis. It disappears with an increase of the effusion, and returns again when this is partly absorbed, becoming in this manner a test of its duration and severity.

Of all the physical signs of pleurisy, those which are obvious to the eye and touch are the most exact and unequivocal in marking out the extent, progress, and decline of the effusion. The first of these then, adopting the order of their occurrence as enumerated by Stokes, is dilatation of the affected side, which may exist, he remarks, long before any displacement of the heart, or protrusion of the diaphragm, or intercostal spaces. It is frequently obvious to the eye, if the effusion be rapid, in a few days, and the decisions of sight may be corroborated by measurement. We must remember however, in order to avoid deception, that the right side is naturally larger than the left, by about half an inch in circumference, as ascertained by Dr Stokes from a careful examination and comparison of twenty cases. A piece of tape, passed

around the chest, fixed to the spine, the two ends meeting in front in the centre of the Sternum, and afterwards compared will form a sufficiently accurate measure for ordinary purposes. Two inferences are deduced by Dr Stokes from his discovery; that in empyema of the left side, this diagnostic sign is most valuable, and in the right, the circumference must exceed that of the left, by more than half an inch, to be decisive of effusion. — Displacement of the heart, is next in order, and occurs sometimes before even any of the other signs.

The mediastinum, not offering the same resistance to the effusion which the diaphragm and intercostal spaces do, of course yields to the pressure first, and the heart is protruded before it into the territory of the healthy lung. Stokes mentions it more particularly as a consequence of effusion into the left pleural sac, omitting almost entirely any notice of its occurrence within the right side. It is doubtless, much earlier recognized, and with much greater facility in the former case, the passage of the heart over towards the right side, being so singular and obvious a phenomenon to the patient himself as rarely to escape attention. To Dr Townsend he ascribes the credit of first observing its displacement upwards and beneath the left axilla; but its displacement downwards and towards the left, he has not mentioned. Such a case occurred during the last winter at the Balto. Alms House. After an attack of pleurisy of the right side, with effusion of

three weeks standing, the impulse of the heart was felt and seen between the 6th and 7th ribs, three and a half inches below the nipple, and half an inch to the left of it. As the patient recovered the heart could be traced gradually retiring to its normal situation.

When the process of absorption commences, especially if it proceed rapidly, and the compressed lung does not resume its functions immediately, or perhaps remains permanently bound down by adhesions, the side is forced in by the outward pressure of the atmosphere, the thorax becomes contracted and irregular in form, the scapula is unusually prominent, and sometimes the side even assumes the shape of a pyramid, the mediastinum constituting the base, and the apex existing at the outer and lateral part of the chest. This contraction of the affected side was supposed by Laennec to occur only in hæmorrhagic pleurisies, which alone gave rise, in his opinion, to those cartilaginous productions, into which the regular false membrane is sometimes transformed. But Andral's investigations have sufficiently proved, that any form of cellular membrane is liable to undergo this species of transformation, and consequently that it is just as frequently the result of a serous as of a sanguineous effusion. The cause of this contraction is considered by the same distinguished pathologist, to depend as much upon the slow absorption of the fluid, as upon the presence of the cartilaginous adhesions. From this slowness, he deduces the chronic character of

the effusion, the consequently longer compression of the lung, and its greater loss of elasticity, whereby it is prevented from expanding and filling up the vacuum occasioned by absorption. More recent observations however have demonstrated that his opinion is erroneous, and that the accident depends conjointly upon the loss of elasticity in the lung, resulting from its long compression, and the rapid, instead of slow absorption of the effusion. The more rapid the disappearance of the fluid, the less time has the previously paralyzed lung to expand, resume its function, and occupy the vacuum. The ribs and cartilages are consequently beat in by the atmospheric pressure, and thence the deformity results. Contrary to previous expectation, this diminution in the size of one side of the chest, is found to be productive of no serious mischief and frequently exists unknown to the patient, until some accidental circumstance reveals it. The sonoriety of the chest, and the respiratory murmur indeed remain feeble, and almost imperceptible, yet the patient pursues his accustomed occupations without the slightest inconvenience. As an illustration of this, Laennec adduces the instance of a distinguished Surgeon of Paris, who as the result of a pleurisy experienced in youth, had a greatly contracted chest, with dulness, and a diminished respiratory sound, yet who enjoyed excellent health, and lectured sometimes two hours a day, without fatigue, or exhaustion. Another singular effect of atmospheric pressure, results from its action through the sound lung and mediastinum

in restoring the equilibrium and obliterating the vacuum. In this manner, the heart from being displaced into the sound half of the chest is pressed gradually over into the opposite side, until it is finally found pulsating, either at the right of the sternum, or below the left axilla, according to the side which is the seat of the disease. Several interesting cases of this character, are related by Stokes in his treatise on diseases of the chest.

The obliteration of the intercostal spaces, and the protrusion of the diaphragm downwards upon the abdominal viscera, follow the displacement of the heart, in the sequelae of pleuritic effusion. Stokes has offered a theory explanatory of the fact that these phenomena are so uniformly tardy in their occurrence, being always preceded for some time, by enlargement of the side, and frequently by displacement of the heart. He conceives them to be produced, not by the mechanical distension of the fluid, which merely enlarges the side, without affecting primarily the intercostal spaces, but to be the effect of the inflammation of the serous membrane, propagated to the adjoining muscular tissue. This sympathetic inflammation produces first an increase, and secondly a diminution in the contractile power of the muscles, precisely similar to the muscular phenomena, displayed in apoplexy. Their increased vital power consequently enables them to resist the pressure of the effusion at the commencement, but the subsequent paralysis finally compels them to

yield before it. The theory is ingenious, and is sustained by the fact, that in hydrothorax, emphysema, or any other disease producing pressure from within, but unaccompanied by inflammation, though the side may be enlarged, and the heart displaced, the intercostals and diaphragm still maintain their relative situations. This affords us also a means of diagnosis between Empyema in its advanced stage, and Hydrothorax, or an hypertrophied liver. In the former the enlarged side presents a smooth, uniform appearance, while a mechanical effusion, or solid tumor pressing the ribs themselves outwards, leaves the intercostal spaces deeply marked between.

We have thus described the common history of acute pleurisy, in its simple and idiopathic form. Its varieties and complications must merit our attention. Of the former, inflammation of the pleura investing the diaphragm, or diaphragmatic pleurisy gives rise to the most characteristic symptoms, and the most serious results. The pain, in this case, is almost always confined to the cartilages of the false ribs, extending from the sternum, into the hypochondrium, and flank of the affected side, is more severe and constant than in ordinary pleurisy, and is accompanied, besides the usual symptoms, with great anxiety of countenance, complete immobility of the diaphragm, the respiration being entirely thoracic, and orthopnoea, the patient sitting up in bed, and keeping the thorax bent upon the abdomen. It is also characterized

by a want of the physical signs, and is occasionally accompanied by hiccup, nausea vomiting, convulsive twitches of the countenance and delirium. This form of pleurisy is generally more fatal, than that in which the other portions of the serous membrane are involved. Again, both pleural sacs may be attacked simultaneously, when the physical signs progress, pari passu, and we are consequently deprived of the advantages obtained by comparison in our physical examinations. The pain here is frequently absent, or is represented by a general soreness of the integuments, but the dyspnoea is great, and alarming. If the effusion be rapid, death supervenes in a few hours, the patient being absolutely suffocated, by the sudden compression of the lungs. If it proceed slowly however, the disease is less dangerous, and the patient may either speedily recover, or the pleurisy become chronic. Another singular variety of pleurisy is the interlobular, an interesting case of which is detailed by Andral, in his Clinique Medicale, and which he supposes has often been mistaken for abscess of the lung. There are no distinctive symptoms whereby it may be recognized. The <u>bilious pleurisy</u> of authors is a form of the disease which occurs endemically in miasmatic districts, and in which the affection is supposed to arise from its contiguity to the engorged and inflamed liver. This relation of cause and effect is sometimes reversed, and we find pleurisy giving rise to jaundice, from the inflammation propagated to the liver by contiguity of tissue. A case of this character is

on record, as having been mistaken by Morgagni, for hepatitis. Of the former nature, or that in which the disease of the liver is the cause, and not the consequence of pleurisy, a beautiful illustration was furnished last Spring, at the Balto. Alms House. A woman was admitted into the hospital, with symptoms of gastritis, for which she was treated, and was recovering, when pain, and tenderness in the right hypochondrium, fever, and other evidences of hepatic disease, developed themselves. Two weeks after their appearance, they were succeeded by an increase of pyrexia, followed by a chill, with dyspnoea, cough, and the physical signs of pleuritic effusion. She died in about six weeks from the commencement of her illness, and the autopsy fully corroborated the succession of the symptoms. A large abscess, occupying the greater portion of the right lobe, existed in the liver, containing about 3 half pints of pus; the right pleural sac was occupied by about 3 pints of limpid serum. Typhoid pleuritis is that variety which occurs in debilitated constitutions, where the powers of life are reduced by long confinement from previous disease, by excesses, old age &c. It is generally complicated with, as it generally supervenes upon, other diseases, makes its approach more insidiously, yields less readily to treatment, calls for a less active kind, and is therefore more dangerous in its nature than the acute form.-

Chronic pleurisy may either be the result of an acute attack, well

marked at the commencement, but imperfectly cured, and running down into this stage, or it may be latent throughout, seizing insidiously upon the patient, and leaving him ignorant of his condition until a considerable quantity of fluid has accumulated within the chest. There is no pain, loss of appetite, dyspnoea, cough, and but a slight acceleration of the pulse, until the gradually increasing effusion so interferes with the function of respiration, as to create sympathetic disturbance of the general system. The expectoration is usually greater, and of a more viscid consistence in chronic pleurisy, and the secreted fluid is more abundant, less limpid, and less disposed to absorption. The physical signs of chronic pleurisy are similar to, and occur in the same order as, with those of the acute form, and it is to them, even more than in acute pleurisy, that we are indebted for our knowledge of the nature and extent of the disease.

The most frequent complications of pleurisy are pneumonia, phthisis and pericarditis. It occasionally occurs also in consequence of the metastasis of gout and rheumatism, and it also produced by any lesion of the neighbouring viscera, giving rise to perforation of its structure. Of this character are the bursting of hepatic abscesses into the lungs, gangrene of the lung with perforation of the pleura and pneumothorax, and the formation of tubercles in previously existing false membranes of the pleura. In pneumonia, when the inflammation reaches the surface of the lung, its serous envelope almost always

becomes involved, and this order of succession is much more frequently observed than that of pneumonia consequent upon pleurisy. The presence of tubercles in the lung is another very common cause and complication of pleuritic attacks. The lancinating pains, which are felt by phthisical patients, at different periods during their illness, are commonly attributed to circumscribed pleurisies, lit up by the irritation of adjacent tubercles, and producing those strong ligamentous adhesions, between the two pleural surfaces, which are so frequently met with in our post-mortem examinations. These tubercles occasionally also become the exciting causes of ulceration and perforation of the pleura, though this is more commonly the result of gangrene of the lung, or the bursting of an hepatic abscess. The developement of tubercles in the substance of old adhesions of the pleura, is another agent in causing this lesion, though less frequently, than those previously mentioned. The occurrence of this accident is marked by new and sudden phenomena, supervening upon the previous symptoms. The unoccupied portion of the pleural sac is suddenly filled with air, escaping from the bronchial vesicles through the opening in the pleura, the lung is at suddenly compressed upon the ribs or vertebrae, and the patient is rapidly reduced to a state of prostration and asphyxia. Great anxiety is depicted upon the countenance, the patient is unable to lie upon the side, and the voice becomes small and husky, or is even altogether lost. New physical signs also succeed the appearance of this new lesion. The percussion is

rendered unusually clear and tympanitic in the upper portion of the lung, with complete absence of respiration corresponding to the situation of the air; below, corresponding to the liquid effusion previously existing, there is dullness, and absence of respiration; the splashing of the fluid is heard on shaking the patient, and the phenomena of metallic tinkling supervene. Death may ensue in a few hours after the occurrence of the accident, or the more violent symptoms may abate, and when phthisis complicates the lesion, it may even result for a time, in an amelioration of the commonly distressing accompaniments of that disease.

The causes which give rise to pleurisy are various; those on which its idiopathic form depends, may generally be reduced to exposure to cold, and dampness. Getting the feet wet, passing suddenly from a high to a low degree of temperature, or having the perspiration checked in any similar manner are its most common excitants. Hence the disease abounds in climates where these vicissitudes are frequent, and from the same cause, it is most common early in the spring, and fall. Sydenham remarked its greater frequency in the spring and summer, and explained it by a reference to the closer proximity of the Sun at those periods, its increased heat acting upon the peccant humors which he supposed to reside in the blood, and to be the proximate cause of pleurisy. These humors, thus boiling up within the system, must necessarily be eliminated, and not finding vent through

the natural channels sick it by an inflammation and effusion into the pleura. Various other exciting causes besides cold, originate the disease. Among these may be enumerated, mechanical violence of any kind, blows upon the chest, fractured ribs, or sharp instruments penetrating the pleura, the bursting of an hepatic abscess into the pleural sac, or simple hepatitis from contiguity of surface, perforation of the sac from gangrene of the lung, and the presence of tubercles or pneumonia in the lung.

Diagnosis. The symptoms of an acute, uncomplicated attack of pleurisy, in a patient of robust constitution, and previous good health are sufficiently plain and characteristic to point out the nature of the disease. But where these are obscured by complication with other diseases, or where any of its numerous modifications are present from accidental circumstances, its diagnosis becomes a matter both of difficulty and importance. It is most frequently confounded with phthisis pneumonia, pleurodynia, and hypertrophy of the liver. Where the approach of the disease is latent, and where bronchial respiration occurs from old adhesions, as before explained, particularly if about the upper part of the lung, the physical signs are very nearly similar to those of tubercle. The dullness is however more absolute, the fluid may sometimes be made to change its position, and these with the difference in the symptoms, and the changes in the physical signs as the effusion advances or declines, are sufficient to point out the

distinctions. From pneumonia it may be known in the earlier stage by the manner of the attack, the absence of crepitation at any period of the disease, the difference in the quantity and character of the expectoration, and the more rapid progress of dullness on percussion. As the effusion increases, the physical signs are sufficient to prevent any error. Nervous or rheumatic pains in the chest, are frequently mistaken for pleuritic attacks, and indeed often simulate them, especially in females and delicate subjects. Dyspnoea is present, together with diminished respiration, occasioned by restraining the movements of the side, but the character of the pulse, the moist skin, and the relief produced by pressure, will generally enable us to recognize the difference.

Hypertrophy of the liver occasioning pain and dullness of sound at the base of the right side, is also another source of confusion. Here too, the general symptoms are usually unlike, but when the effusion is gradual and insidious, we must trust more to the physical signs for assistance in our diagnosis. The most important of these is the effect produced upon the intercostal spaces and diaphragm. In the latter stages of pleurisy, the former are obliterated, and the diaphragm is protruded downwards, pushing the liver before it, and forming a sulcus upon the integuments, above the space between the two convex surfaces. An enlarged liver, on the contrary, pressing upwards, causes no such furrow, and moreover leaves the intercostal spaces plainly defined. The respiratory murmur, moreover is clear, above the dullness

and its extent is increased at each inspiration. Diaphragmatic pleurisy again, as we have before stated, is sometimes complicated with jaundice, and this latter affection alone may be noticed, while the former is overlooked. A case of this character, as we have before mentioned, was actually mistaken by Morgagni for hepatitis. The symptoms of inflammation of this portion of the pleura, however, are so marked and distressing, that they can hardly escape notice.

Prognosis. Simple acute pleurisy is seldom fatal. When trifling in extent, a false membrane is formed in a few days, and with its organization the disease is cured. Occupying a somewhat greater surface, the disease exhausts itself in a week or two, according to Broussais, but Laennec regards a cure as seldom taking place in less than a month. Its danger depends upon its complications, its causes, the extent and situation of tissue involved, the presence or absence of effusion, when present, ~~the~~ its rapidity of secretion, quantity, and duration, the constitution of the patient, and the treatment of the disease. Complicated with other diseases, it becomes of course more dangerous, in proportion to the danger of the associated affection. Tubercles, by acting both as a predisposing and constantly exciting cause, and pneumonia, both by creating a new disease, and being in itself formidable, diminish thereby the chances of recovery. Where however, the pneumonia and pleurisy are developed simultaneously, Laennec regards the complication as less dangerous, than either separate

affection. The effusion, he says diminished by its compression, the spread of inflammation in the lungs, and the solidified lung, by its resistance limits the extent of the effusion, and promotes its more rapid absorption. In general, pleurisies produced by mechanical agents, as wounds, perforations from abscesses &c, are more fatal, from the greater intensity of the inflammation, and from the presence of air, than where the disease arises from constitutional disturbance. Inflammation involving a large portion of one pleura or parts of both, is more formidable than when the disease is circumscribed. Hence, a first attack is more to be dreaded than subsequent ones, as the existence of previous adhesions, tends greatly to circumscribe the inflammation and effusion. Where lymph alone is the product of inflammatory action in the pleura, constituting dry pleurisy, the case is more favorable than where effusion supervenes. Effusions into both sacs, particularly if rapidly formed, are frequently fatal in a few hours; in other cases the danger is directly proportioned to the rapidity and extent of the effusion. Where one lung only is engaged however, if the pleurisy be simple and acute, even if the effusion be copious, we may generally anticipate a favorable result. That species of pleurisy which attacks the serous envelope of the diaphragm, from the alarming shock communicated to the nervous system, the violent pain, and the extreme dyspnoea, terminates more seriously than where the costal, or pulmonary pleura alone are involved. The previous health

of the patient, of course, greatly influences the termination. Typhoid pleuritis, occurring as it does, in depraved constitutions, and almost always complicated with other chronic visceral disorders, may be regarded as a dangerous and almost hopeless variety, scarcely admitting of treatment, besides being masked by the symptoms, and aggravated by the presence of the accompanying lesions of other organs. Chronic pleurisy, (frequently confounded as it has been with hydrothorax or consumption, and its pathological causes and conditions very imperfectly known) had until lately been generally regarded as almost necessarily fatal. Even Laennec looked upon it as incurable in more than one half the cases, and Bretonneau's opinion of its danger is still more discouraging. Though universally acknowledged to be more difficult of cure than the acute type, as the recuperative powers of nature are more enfeebled, and there is a greater tendency to the occurrence of consecutive disorders, yet Drs Stokes and Hope have both practically demonstrated its almost uniform surrender to judicious and well-conducted treatment. Finally, the effects of prompt and vigorous treatment are very satisfactory in the cure of pleurisy, an acute attack yielding readily to its employment, and, as we have just stated, the chronic variety being much more amenable to remedies than was formerly imagined.

Treatment. The indications for treatment in pleurisy, are plain and simple; in the first stage, to subdue inflammation, and

in the second, to promote the absorption of the fluid, and prevent its farther deposition. In fulfilling the first of these, bloodletting holds an important rank, and has been employed in the cure of the disease, ever since its existence and nature have been known. Sydenham was familiar with its powers, and bled from a free orifice, repeating the operation, if occasion required, to the extent of forty ounces. After this, he trusted to soothing and emollient cataplasms, rigid regimen, and demulcent, diuretic, and diaphoretic medicines to complete the cure. The extent to which bloodletting should be carried, and the time to which it should be extended, have been matters of much dispute. Some have regulated its employment by the pulse, others by the pain, and others again have proportioned it to the dyspnoea. Now, as none of these are constant symptoms, or if present, are sometimes very imperfect criteria of the intensity of the disease, so none of them can be exclusively relied upon, as certain guides in a matter of so much moment. We should rather depend upon its effect upon the general strength of the patient, regulating it accordingly, repeating it, if necessary, but always producing a decided impression upon the symptoms and constitution. Generally, large and repeated bleedings are not so imperiously required in pleurisy, as in pneumonia; the disease yields more readily to the lancet, and after the second bleeding, if complete relief is not obtained, it is better to rely upon local abstractions of blood, counter irritants &c. –

As the pulse frequently remains accelerated, even after the disease becomes chronic, and when there is no longer either pain or dyspnoea, we must not consequently expect its immediate reduction, nor should we endeavor to produce it by too liberal an employment of the remedy. As soon as it is rendered so compressible, as to be readily stopped by the finger, we have abstracted as much as the disease requires, and as the constitution will bear. The blood drawn, usually presents the buffy coat, and indeed much more constantly than in most other affections of the same nature. This circumstance was observed by Sydenham, as were also the modifications occurring in the appearance of the blood, from the manner in which it flowed from the vein. Subsequent to blood-letting those internal remedies are to be administered, which will assist the former in subduing the inflammation. The most effectual of these is tartar emetic, which may be exhibited in quarter, half, or even grain doses every two hours according to the urgency of the symptoms. Though not so powerful an antiphlogistic in this disease, as in pneumonia, it is still an extremely useful auxiliary, and should never be omitted during the first few days, or as long as the fever and pain continue. Complete abstinence from food should also be enjoined, and the patient confined to bed. After these measures have partly controlled the inflammation, and effusion has accumulated within the chest, blisters applied to the affected side, constitute a most energetic and powerful means of reducing the quantity of fluid

and preventing its farther secretion. Simultaneously with them, diaphoretic anodynes, of which the Dovers powder is the most effectual and certain, may be exhibited. They are serviceable, both in lulling the pain, and thereby quieting the remaining irritation, and in promoting the secretion of the skin, rendering it an outlet for the loaded and perturbed circulation. At a later period, while the effusion still remains unabsorbed, mercury should be steadily exhibited, until the system is brought under its influence, with a view to promote the more rapid disappearance of the fluid. This was the routine of treatment pursued at the Balt. Alms House the past winter, in several cases, and with uniform success. The mercury however, was not pushed to salivation, where the attacks were slight. In one patient, not seen until three weeks had elapsed from the invasion of the attack, the effusion was sufficient to give rise to dullness of two thirds of the lower portion of the right lung, with absence of the respiratory murmur, distinct oegophony, dilatation of the side, which was one inch larger in circumference than the left, and displacement of the heart. Under the above plan of treatment, the lung regained its functions at the expiration of one month, the respiratory murmur reappeared, the side decreased to its natural size without contraction, and the heart resumed its normal situation. In addition to the above measures, some, among whom may be reckoned Sydenham, Bronsais, Andral, Stokes and Williams have recommended the use of emollient and soothing poultices to the

chest, but Laennec regards them as affording but very inadequate assistance, and but partial and temporary relief. Where we wish to promote the flow of blood from leech-bites, they may be usefully employed; otherwise, the inconveniences attending their application, are sufficient to prevent them from being generally prescribed. Purgatives may occasionally be used with advantage when the patient is first seen; if disorder of the digestive functions complicates the disease, a full dose of calomel, on commencing the treatment, is often productive of the happiest effects. This class of remedies, however should not be indiscriminately employed, nor long continued, for fear of prostrating the strength of the patient, already weakened by previous remedies, and which moreover, is so much needed to sustain him through an always tedious, and perhaps very protracted convalescence. The physician cannot be too strictly on his guard against any imprudence in diet on the part of his patient; and this is a difficulty which he will always have in some degree to contend with. From the fact of effusion frequently existing to a considerable extent, without any distressing symptoms, the patient is apt to suppose himself convalescent, and to commit those imprudences, in consequence, which are always sure to aggravate the affection. Improvement in diet should be resumed gradually, and only with the commencing diminution of the effusion. This is frequently found to correspond with the sudden elimination of a large quantity of fluid, by any of the natural channels, denou-

inated crises, and this fact suggests to us an important consideration in our treatment. These crises should be gently encouraged and promoted, chiefly by diuretics and diaphoretics — purgatives are objectionable on the grounds before stated, and it would be a futile task to attempt their direction by expectorants. Demulcent drinks, warm clothing, and opiates constitute our best diaphoretics, while any of the neutral diuretic salts, acetate and nitrate of potassa, or infusions of digitalis, juniper, and spts of nitrous æther will fulfil the other indication. The greatest care is requisite, not to dismiss the patient as cured, before we have fully satisfied ourselves from the physical signs that such is really the case. This is announced by the return of the natural resonance of the chest, by its diminution of size when it has been dilated, and by the presence of the respiratory murmur. It sometimes happens however, as we have before stated, that owing to false membranous adhesions, the lung continues permanently dull, and the respiratory murmur is feeble, or absent. In this case the chest is always more or less contracted, and by the proportion existing between its contraction, and the want of the natural sounds, we are to estimate the presence of these adhesions.

An imperfectly cured pleurisy is always sure to degenerate into the chronic form, or it may assume this type from the commencement, in either case, demanding a careful and patient plan of treatment. This should be less active and depletory, but more

persevering and continued, than in the acute stage. Cups or leeches to the side, will generally be advisable, even though the disease be advanced, followed up by a succession of blisters, and aided by diaphoretics, diuretics, and a rigid regimen. It will generally be expedient also to exhibit mercurials, if this has not already been done, until ptyalism is the result, which may be hastened if necessary by mercurial frictions together with its internal administration. Stokes, seconded by Williams and Hope, insists strongly upon the happy effects of iodine, used both internally and externally. The former usually employs a pint of Sugol's mineral water daily, and from two drachms to half an ounce of ointment rubbed into the side, while the two latter have given preference to the hydriodate of potassa, in from three to eight grain doses thrice a day. The cure of twenty consecutive cases attests its value in the hands of Dr. Stokes, while Dr Hope reports the successful issue of thirty three cases, by the use of it and similar means. These results teach us that chronic pleurisy is by no means the formidable disease which it has been heretofore supposed, and also demonstrate that the operation for empyema, in cases in which it has been performed, might have often been forestalled, by judicious and scientific treatment.

The operation has generally been regarded as necessary, under either of the following conditions: in the first place where the effusion is so rapid, in an acute attack, as to threaten immediate suffocation,

and secondly, where the disease has resisted in the chronic form, all the ordinary remedies. With reference to the first, Andral very justly remarks, that the cause being left untouched by the operation, the fluid will again be secreted, and no permanent relief be obtained. Life, however, might be prolonged by it, and the operation, consequently be serviceable. As regards the latter predicament, it is universally conceded that the chances for the success of the operation are small. In addition to the disease which we seek to relieve, tubercles are frequently superadded in the lung itself, rendering a final cure impossible. Air, again, almost always finds an entrance into the evacuated cavity, and by its presence, aggravates the symptoms, irritating the pleura, rendering the secretion purulent, and foetid, and sometimes causing gangrene of the membrane. The lung is, owing to the usually long deferred employment of the operation, is almost always bound down by firm and rigid adhesions, which prevent its expansion, and afford an additional facility to the passage of air into the pleural sac. For these reasons, the operation is seldom attempted, though it must be admitted, that cases have occurred in which its performance was necessary, and in which it was followed by the restoration of the patient. The mode of operation, belonging more particularly to the province of surgery, we shall not here describe.

An Inaugural Dissertation On Strictures of the Urethra

Submitted to the examination
Of the
Provost, Regents & Faculty of Physic,
Of the

University of Maryland

For the degree of Doctor of Medicine
By

William Gore
of Pittsburgh
Penna

February
1842

Stricture of the Urethra

Strictures of the Urethra, are the result of inflammation of the lining membrane, giving rise to a deposition of lymph, which, eventually becomes organized, or to ulceration, and Cicatrization -

This inflammation, is dependant on various causes, but, ninety nine out of one hundred times, it is the result, of neglected, or badly treated, Gonorrhea.

This disease is sometimes very insidious in its advancement, the Patient being entirely ignorant of its existence; but eventually he finds some pain in urinating, the water becomes high colored, and acrid, - there is also heat in the perineum, the Testes become enlarged, and painful, with pain in the lumbar region extending down the thighs; and the irritation extending to the kidnies pain is felt a short distance remote from them, rather in under the edge of the

false ribs. The Constitution all this time, is more or less involved, and a general disturbance of the patients health will take place he will consequently have fever, furred tongue, hard tense pulse, want of appetite, constipation of the bowels, with a sallow countenance and general emaciation - he will complain of want of sleep restless nights, with a constant desire to urinate, sometimes he will be compelled to pass ~~urinate~~ water ten or fifteen times, from the time he retires, until morning

After this state of things has existed for some time, exacerbations of fever will take place, towards evening, with great sensibility to cold, so much so, that, the patient finds it impossible; notwithstanding a superabundance of clothing to keep himself comfortable, and fulling, as if, the air, at ordinary temperature, would freeze the vital

current - The stream of urine being bifur=
=cated or twisted, is considered by most
surgeons, as a prominent symptom; but
having observed this in many persons totally
free from any obstruction in the urethra,
I have omitted it -

Stricture, most generally,
is found near the orifice of the urethra;
or about three inches from it, where the
accelerator urina muscles are inserted
and not very frequently, at the bulbous
portion -

Strictures are of various kinds.
there may be merely a band encircling
the canal, or it may extend from one to
three inches, and sometimes the deposition
takes place only on one side, ~~and~~ leaving
the opposite side before it, and making
a considerable curve in the urethra -
there is also spasmodic stricture

but this is dependant on spasmodic contraction of the Accelerator Urinæ Muscles, and not necessarily accompanied by any permanent obstruction.

Sometimes suppuration takes place in the cellular tissue beneath the Urethra, and fistulous openings are formed - The pus which is secreted is usually much averse to coming to the surface, and goes on insinuating itself be= =tween the membranes & and a case is related, by Professor Smith in his Lectures, where it travelled up into the abdomen, forming immense abscesses, and destroying a great portion of the cellular tissue, but notwithstanding very little hope was entertained of this Patient surviving, he recovered - occasionally when fistulous openings exist for a length of time the urine ~~being~~ is discharged through them

accompanied by fetid matter, giving rise to irritation, and excoriation, of the surrounding parts, and emitting an effluvia not only rendering the patient intolerable to his friends, ~~to his friends~~ but a burthen to himself - feeling, that death would indeed; be a welcome messenger, to relieve him of the unmitigated suffering he is called upon to endure

Then we have a complete Fistula in Perineo.

The first thing - when a patient having any of the prominent symptoms I have enumerated, presents himself to the notice of the Surgeon - is to examine the State of the Urethra - this is to be done either with a Silver or Gum Elastic Catheter; the former in the hands of a skilful practitioner

is decidedly the best.

The proper manner of introducing the Catheter is of considerable importance, and the Surgeon not having some tact, and address, in its management, may utterly fail to effect its passage into the Bladder.

The Patient is either placed in a horizontal position, or standing with his back against a wall, — the latter is generally preferred, unless there is considerable debility — the Surgeon seats himself in front of him after having rubbed the instrument briskly, through his hands for a few moments, to give it the proper temperature, dips it in oil or some other bland liquid: then grasping the penis with the left he inserts the point of the instrument with the right hand

having the convexity towards the abdomen; but with regard to this, Professor Smith says it is better for the young practitioner to place the concavity upwards, as, the urethra is liable to be lacerated, in making what is called the "Master-turn", after it has been inserted in the former mode — but which one may may be preferred, the handle should be held exactly in ~~the~~ a line with the patients body, taking care that he is perfectly erect; it is then passed on — if no obstruction occurs directly to the Bulb of the urethra; where there is a little cul-de-sac here the instrument may become involved and if we attempt to overcome the ~~obs~~ resistance, to its passing, by using violence or force we may do serious injury

but instead of using force, we must lift both the instrument ~~up together~~ and the passage up together, by placing the fingers on the perinæum, it will then pass into the membranous ~~part~~ portion, when from ~~the~~ its looseness we may again force it stopped, but we must again draw back and practice the same manipulation, which will generally bring it into the prostatic portion, and by introducing the index finger in the Rectum, it straightens the Urethra, now by depressing the handle of the instrument, it mounts over the Pubis, and ~~and~~ passes at once into the Bladder = but should a stricture exist we shall find the introduction of the Catheter, resisted ~~we must~~ then having satisfied ourselves ~~of its uncertainty~~, we must postpone its

further use until we have paid some attention to the constitutional treatment, by exhibiting cathartics use of warm Bath, friction, over the whole body; with perfect repose in the horizontal position, after a few days under this course of treatment we may ~~then~~ commence the mechanical means, and the Bougie is now to be resorted to. This acts not entirely mechanically, but by its use the sensibility of the parts is blunted, and it also solicits and favors absorption. When we attempt to introduce the Bougie sometimes a spasm of the urethra will take place owing to the irritability of the parts we must then immediately desist and endeavor by giving an Anodyne injection with warm bathing to overcome it.

It is recommended after having discovered the situation and extent of the stricture to commence with a Bougie just sufficient to pass through the orifice and gradually

increase until one of the largest size will pass without inconvenience

The Gum Elastic Bougie is the one generally preferred, and Professor Smith recommends where the Stricture is on one side that instead of a fine Stilet an made of Whalebone should be used -- The Patient should be taught to use the instrument himself for often after the disease seems relieved, it will have to be used every two or three days, for some time, and occasionally during his whole life ——

A Stricture may be more or less Tensive, and to ascertain its length Sir C Bell used a Canula through which was passed a Stilet, having on the end a smooth ball, which was passed through the Stricture, and the place marked, being then withdrawn

the length of resistance was also mastered, and by this means he discovered its extent. Ducamp, invented an instrument, which, being covered at the end with wax, we can take an impression of the stricture, so that we know exactly its form, and the manner of treating it is indicated — Sometimes we are obliged to divide it with a knife, either from its being so small that we cannot introduce an instrument at all, or, from the contraction of the canal on account of the excessive irritability. The instrument used for this purpose is a concealed knife, contained in a canula, which is passed down to the stricture, and the surgeon strikes the end of the wire to which the knife is attached a smart blow with a small hammer ~~which~~ it at once passes through it.

When the Stricture is on one side, a Canula from which a lateral portion has been removed, the Stiff string passed along with its edge towards this opening, may be introduced, in the same manner. and where this remedy fails we must cut down from the outside and make division of the Stricture —

Many Surgeons have recommended the use of Caustic — but others condemn it, from the danger of cicatrization.

The Slippery Elm Bougie is recommended by Professor Smith, in some cases as after being passed into the Stricture it becomes moist and swells sometimes dilating the Stricture considerably.

Forced injections into the Urethra have also been recommended, but they have not been found of much benefit.

Where fistulous openings are found

sometimes there are extensive Canals, formed in the Cellular tissue, and the are obliged to lay them open, and pass a Catheter into the Bladder, and let it remain there, until the parts are healed —

Occasionally when the Surgeon is not sufficiently prudent, or cautious, in introducing the Bougie, it catches in the little lacuna, and then by urging it forward, it forms a false passage, and eventually one of the most troublesome Cases, the Surgeon has to deal with; in the treatment of this, we must endeavor to find the natural passage, and this is best ascertained by keeping the instrument well up, against the upper portion of the Canal

In the use of the Catheter or Bougie it becomes necessary that the Surgeon should

use the utmost care, as by rashness, or endeavoring to overcome obstructions which may exist, by mere force, more injury may be done in a moment, than all the combined tact and address of the most splendid surgeons of the age, could overcome in a lifetime — and bring to its subject a life of unmitigated suffering only ending in an untimely grave!

An
Inaugural Dissertation

on

Gonorrhoea

Submitted to the examination
of the Provost, Regents and
Faculty of Physic

of the
University of Maryland

For the Degree of Doctor of Medicine
by
R. S. Harlan
of
Harford County. Md.

February 1842

is so familiar. Gonorrhoea is an inflamation of the mucous coat of the urethra from the action of a specific virus. High authorities conflict here. The humble writer, relying on numerous facts, stated by good authority, prefers the above opinion.

Cause

The disease is produced by the application of the "specific virus" to the mucous surface of the urethra, almost always, at its orifice, during coition with women infected with gonorrhoea. Though it is sometimes deposited upon the glans penis, and then by the retraction of the penis, and the return of the prepuce over the glans the virus

is brought in contact with the mucous surface, where alone it can act to produce the disease.

Symptoms

About a week, varying greatly, from three days, to twelve, and in some cases, still longer, after inoculation, the disease develops itself thus, a tickling or itching at the glans penis is felt, and on examination the patient finds the orifice red, and its lips swelled and tender, and perhaps a drop of matter escapes whilst he is handling it. This limited inflamation soon extends along the urethra, and to the glans and prepuce. A discharge from the urethra occurs, at first, of a thin white matter, afterwards thicker and tenacious, usually yellowish and sometimes

green, its odor is not remarkable nor uniform, sometimes it is fetid. This symptom sometimes alarms the patient. ~~sometimes~~ The pain extends along the urethra, and throughout the glans, in the former site aggravated by urination— the prepuce swells— the anterior half of the penis seems large, especially the glans, which has a shining aspect— sometimes phimosis or paraphimosis occurs.

In proportion to the inflamation, is the ardor urinae, the swelling of the glans, and usually so, of the prepuce, the reduction in size of the stream of urine, the soreness in the perineum, frequency of micturition, and tenesmus. When the inflamation has extended to the bladder and rectum, the urine is often irresistibly voided every few minutes, and the frequent calls to stool are very distressing.

The inguinal glands not unfrequently swell, or a testis inflames with a great

reduction or suppression of the discharge from the urethra. Sometimes inflamation of the glands in the inferior surface of the penis, or abscesses of the perineum ending in fistulous openings, exist. A very painful and very common symptom is chordee; at night, mostly painful, involuntary erections of the penis, usually exist, with the ardent state of the inflamation, and almost always it is the most persistent of the symptoms, sometimes the penis is curved anteriorly or laterally, and should this symptom continue, with high inflamation, coagulable lymph may be deposited in the corpus spongiosum so as to prevent the future distention of the cells to an extent equal to that of the corpora cavernosa, and the penis ever after, during erection remains deformed. The gonorrhoea if not cured may cease spontaneously, or become

gleet, such a state of chronic inflammatory action as to keep up a discharge from the urethra, and this continues for several months, and even years, it is difficult to say when there is such a change in the inflamation that the matter losses its infecting property, then properly the term gleet is applied.

Stricture is the most frequent and important sequela of gonorrhoea.

Ophthalmia is sometimes produced from inoculation of the conjunctiva with the virus, by persons washing their eyes with the urine, while laboring under the disease.

The disease in women is much milder, & is generally easy of cure, though in some cases of a worse character, much pain & suffering exist.

Diagnosis

Other inflamations, attended with discharge of matter from the urethra, do not affect the glans penis and prepuce so much, nor do they produce chordee so frequently - and never give the glans the polished aspect - The matter is less tenacious and the inflammation is not so apt to spread, except by following the mucous coat into the bladder.

Prognosis

The axiom in medicine, that the constitution of the patient greatly varies the aspect of any disease, is here also verified. Some cases get well very quickly, and by the simplest

means. others are of the most invet-
erate nature and resist remedies,
and by the pain and symptomatic
~~pa~~inflammations greatly prostrate the
general health reducing it below
the point at which morbid impres-
sions are resisted.

Cases of a "first class" are said
to be most difficult to cure. The
occasional persistence of the disease
is such, notwithstanding early and
proper treatment, that in an individ-
ual case not before treated, whence
the susceptibility, of the patient to
this inflamation, may be known,
a guarded opinion should be
expressed.

Treatment

The remedies for gonorrhoe are constitutional and local. The former are chiefly to be used in the commencement of the disease and during the stage of high inflammation, while the latter are applicable to all states of it. In severe cases and in persons of plethoric habits venesection is frequently needful, saline cathartics always are useful, and generally a free use of them, light vegetable diet, and repose are valuable - demulcent diluents - occasional tepid baths - will do much. The local applications that may now be employed are linen wet with lead water, infusio lini, milk and water, or an aqueous solution of Opium to be lapped around the whole penis and continually applied, the tempe-

rature to be cold or tepid as may be most comfortable to the patient, sometimes one condition is much more soothing than the other.

After two or three days the saline evacuants may be omitted, and then add Antimonii et Potassae Tartras and Potassae Nitras or Spiritus Aetheris Nitrici to the diluent drinks, prescribing the quantity medicated to be regularly administered, and the simple diluent ad libitum, the object is to restrain the patients appetite, keep the bowels free, and gradually induce vascular sedation. Now, or immediately after the saline cathartics give Balsam Copaibae alone or with Spiritus Æthe. Nit. in the dose of ʒ ß. of each two or three times a day. if the balsam affects the bowels add Tinc. Opii, or give the balsam, Tinc. Opii, and an emulsion together, or the solidified balsam in

pills may be given. The aptness of this medicine to affect the stomach with disgust, or active irritation, renders it necessary to change the form of exhibition, or even to suspend it.

The following prescriptions containing balsam come from high sources and are worthy of much confidence.

℞ Balsami Copaibae
Spiritus Aetheris Nitrici āā ℥ss.
Pulveris Acaciae Gummi
Saccari albi āā ʒi
Spiritus Lavandulae Comp. ʒii
Tincturae Opii ʒi
Aquae fontanae ℥iv

Misce. One table-spoonful, three or four times every day, to be taken.

The following is a more active preparation. ℞ Balsami Copaibae
Pulveris Cubebae āā ℥i
Liquoris Potassae ʒii
Acaciae Gummi ℥ss.

Aquæ Rosæ ℥vi

Misce. Dose one table-spoonful three or four times daily.

The following will be found useful

℞ Pulveris Cubebæ ℥ß.
Balsami Copaibæ ʒii
Ferri Sulphatis ʒi
Resinæ flavæ ʒiii

To be made into boluses of grs.x each and fifteen to thirty to be taken at intervals during the day.

Other preparations might be given, but the above are sufficient for the present. Where the Balsam is inadmissible, or if a resort to it is not deemed expedient, use from the earliest stages injections, into the urethra, of Infusio Lini; the use of a rich mucilage of this article of the proper temperature, the patient being careful not to irritate by the point of the syringe, is followed by an immediate, and temporary sense

of ease, if the operation is properly done, the whole inflamed mucous membrane can have this emollient applied to it.

When this is frequently done, the utmost care being taken to avoid irritation with the syringe, almost always the greatest benefit results, the ardor urinae is surprisingly abated - nothing peculiar is attributed to the linseed, this article of the class has been more used from being more frequently at hand. Demulcents, by exciting the action of the kidneys and blunting the acrimony of the urethral discharge, are always useful, and should never be neglected.

A warm bread and milk poultice in the commencement has been used with advantage. In applying it, the prepuce should be retracted, and the glans penis completely buried in the poultice, which

should be as warm as the patient can bear it, and renewed frequently.

By thus continuing the poultice for a few days, all the symptoms are mitigated, and mild and warm injections may then be used, such as rose water, thin solutions of gum Arabic, flax seed, or opium, weak decoctions of oak bark, &c. This frequently effects a cure. Sometimes it is needful to use, after the ardor urinae and discharge diminish, more astringent injections, and finally the solution of the nitrate of silver.

At first, the solution should be weak, and the strength gradually increased.

To many patients the poultice would be a great objection, and under such circumstances the following course might be pursued with success. A few doses Magnesiae Sulphas,

the diluents; light vegetable diet, &c. injections of infus. lini, afterwards mucilage of acacia, watery solution of opium, liquor plumbi subacet. dilut. and finally Solutio Nitr. Argenti, cure many cases easily.

But it is only with a patient, who will use the syringe with the utmost caution, that it is proper to pursue such a course, for one rude application of the instrument will inflict as much injury as the most careful treatment can rectify for days.

In some obstinate cases, dilute nitric acid has been successfully used, both in this country and Europe. The Vinum Opii has been recommended in the early stage of the disease, at first, much diluted, but afterwards gradually increased in strength until it is used

pure. Even a bougie introduced into the urethra has cured some mild cases, some recommend the bougie to be smeared with Nit. Argenti mixed with Oleum Olivae. The caustic in substance, has been applied to the whole inflamed part of the urethra, but some unpleasant consequences sometimes follow its use, so that it cannot be recommended unless in cases where speedy cures are absolutely necessary.

It may be applied with more safety, and generally with the happiest effect, in gonorrhoea in women, in which cases all the remedies used in gonorrhoea in men, must be used stronger, and in larger doses, on account of the less sensibility of the parts affected with the disease.

Whatever may be adopted in the early period of the disease, after the active stage has subsided, injections of some vegetable astringent, Kino, Catechu, Balsam Copaibae, Solutio Acetatis Zinci, Solutio Sulphatis Zinci, a weak solution of Cupri Sulphas, Argenti Nitras, Ferri Sulphas, Alum, Liquor Aluminis compositus; Iodine, Creosote, Camphorated oil, port-wine, or Hydrargyri Chloridum Corrosivum, may be used. The Creosote may be prepared by mixing one or two drops with an ounce of dilute mucilage of acacia. The Portwine diluted with water, or mucilage. Nitrate of Silver, two or three grains to an ounce of pure water. All of these may be increased gradually in strength, and frequently prove very useful. In using injections it is best to commence with those of a mild character, and after, use stronger ones.

Cubebs, liquid Storax, Oleum Terebinthinae, and Iodine have been used in the declining stages of the disease. Some recommend Cubebs in the commencement, but I am disposed to condemn the ~~use~~ use of it during the inflammatory stage, as it is too stimulant, unless the person be of a feble and relaxed constitution, where we seldom have the high inflamation. When the inflammation extends to the bladder or rectum, leeches are to be applied to the perineum, warm bath, opiate glystens, and warm fomentations to the perineum, are proper.

From irregularities in diet, debauch, the use of too strong injections, the urethral discharge may be suddenly suppressed, and hernia humoralis supervene. In such cases it is always best, if possible, to re-

establish the discharge. This is generally accomplished by warm poultices, large enough to cover the whole scrotum and penis, or sometimes a bougie, introduced into the urethra, may produce the desired effect. General and local blood letting, together with purgatives should be used, and the patient confined to the horizontal posture.

As Chordee is one of the most troublesome attendants on gonorrhoea, it should be checked as soon as possible. Opium, combined with Camphor, and given in large doses, will often prove efficacious in arresting its progress. Where the patient is liable to constipation, or the Opium produces such a state of things, then Hyosciamus, with Camphor, in full doses, is preferable. Local applications

are very efficacious, and often suffice without the general remedies just enumerated, these are, a poultice of tobacco, lint saturated with its infusion, or a common poultice sprinkled with powdered camphor applied to the perineum.

Gleet, when it really proceeds from gonorrhoea, and is not connected with stricture of the urethra, will generally be benefited or cured by stimulating injections, composed of the sul. or acetate of copper, of the ~~sulp~~ sulphate of alum, of the oxymuriate of mercury, &c. if one fails others may be used.

Blisters to the perineum, the internal use of cantharides, the muriated tincture of iron, or the tincture of cubebs

should be used. Even a bougie plain or medicated will often affect a cure.

An
Inaugural Dissertation
on
Puerile Miasma
Submitted to the examiners
Present, Regents and Faculty
of the
University of Maryland
for the degree of Doctor of Medicine
by
Caspar Wistar Morris
Philadelphia
Pennsylvania

An Inaugural Dissertation

on

Paino-Miasma

Submitted to the examination of the Provost, Regents, and Faculty of Physic of the

University of Maryland

For the degree of Doctor of Medicine

by

Casper M Newman

of

Luzerne County Pa

Feb. 15th 1842

To

Professor Chew

Whose abilities and virtues have secured to him the confidence and esteem of the class, I inscribe this thesis, which is more honoured by his name than is he by the dedication.

Koino-Miasma

This deleterious agent must have been primeval with the commencement of the human species. The ancient Greeks were acquainted with its pestiferous influence; they believed it to emanate from stagnant water, and made it one of the labours of the potent Hercules to drain the Lernean marshes.

The occult, and mysterious nature of this agent, affords great latitude for theorizing, and hence we have notably, as many theories upon it, as we have writers: this tends very much to perplex the medical tyro, who is obliged to be guided by books.

Its absolute nature has as yet eluded detection, and most probably ever will, as the quantity in a given portion of atmosphere must be relatively minutes. It was hoped that Chemistry, which within the last century has been advancing with rapid strides towards unlocking the arcana of nature, would detect its presence, and investigate

its nature, but those hopes, thus far, have been abortive. Professor Julia of Lyons, among others who have turned their attention to this subject, analyzed the air of marshes and found it to differ in nothing from the ordinary atmosphere.

Many in their attempt to reach its absolute nature, have assumed some one of the gases given out in the decomposition of animal and vegitable matters as the agent. Azote. ammonia, carbureted hydrogen, nitrous oxide, and sulphureted hydrogen, have all in turn been the bases of theories; but observation (by experiment) has shown that they may all be respired either singly or in combination, without producing any effect analagous to those of miasma, hence we must look for some other agent.

Some suppose the air of malarious regions, to be teeming with myriads of animalcula, which are taken into the

system through the lungs, and then irritation gives rise to the phenomena of periodical diseases (vide Cooke on infection) This theory has not the least foundation, based upon facts, and is one of those fostworks of fancy, with which medical writings are so replete.

Webster, (vide his work on Pestilence) after having collected all that has been written upon this subject from the days of Moses up to his own, comes to the conclusion, that, the effects are produced by some disturbance (unknown) in the electric fluids. If this was the cause, the condition would not be confined to the atmosphere of stagnat pools, but the hill and the dale would alike be affected.

Eberle, and indeed the majority of modern writers, maintain that it consists in "particles of putrid vegitable and animal, matter dissolved in aqueous vapour", though they differ as to its being a simple gas, or the matter itself

in a state of minute division. I conceive this question to be settled by the fact, that those gases are not found to produce such effects when collected and inhaled. Among those who are of the former opinion are Thomas. Cooke. Demeste.

Has animal matter any thing necessarily to do in the production of periodic disease? I think not, and think the position is supported by undeniable facts. Nevertheless. I do not believe it to be an inmotive substance, as many do, but believe its deleterious influence under certain conditions, is fully as much, if not more, decided than that of vegitable; this we must believe if we place any confidence in our highest authorities, for they are replete with testimony of this nature.

Upon this subject Professor Potter observes, (vide his memoir on contagion medical recorder vol 1) that although human miasmata and vegitable effluvia are equally the result of

putrefaction, their action upon the living system appears to be different. Human effluvia would seem to inflict a more poisonous and stupefactive wound upon the nerves, impairing their mobility, and rendering them less capable of high reaction; while those arising from vegitable decomposition would appear not only less deadly to the organs of sense, but calculated to render them more exquisitely sensible. The operation of the former would seem to justify the conclusion that it does not alone occasion the least disarrangement of the functions of the hepatic system, while the latter invariably molest the operations of the liver.

Webster, Pringle, Cooke, Lind and others, have related cases in which persons have lost their lives from coming in contact with the effluvia from Putrefying animal matter

Vaughen (vide medical Recorder No 27) informs us that some persons were engaged in digging near a well in Narbonne in France, which had been the repository for years of the remains of human dissection. They accidentally penetrated the walls and came in contact with its putrid contents; of 9 who were engaged 4 died from its effects and the three remaining suffered extremely, barely escaping with their lives.

It would appear that it must have been confined, as above, or as it were stagnated before it is competent to produce these effects, for as it is given out under ordinary circumstances, it is very evident, that it will not produce them, indeed in this way it appears comparatively innocuous.

As it eminates from slaughter house, privies, dissecting rooms &c it is inhaled with impunity.

So then, under certain circumstances animal effluvia are decidedly deleterious, but under ordinary circumstances they are not. They are under no circumstances the agent in the production of periodical disease; as, when they are deleterious they manifest their effects differently, generally prostrating the system at once.

If they produced intermitting fevers, in their ordinary mode of emination, the dissecting room should be a prolific source of them for here they must be present in a highly concentrated condition, but it is inhaled for months and no one has intermittents

We are informed (Dr Potters lectures) that wagon loads of locusts are are annually thrown upon the shores of the Mediterranean, and there putrefy without producing disease among the adjacent inhabitants. The shores of some rivers are yearly lined with

putrefying fish and produce no disease.

Is putrefying animal matter any more abundant in malarious sections than in the surrounding country which is salubrious? I think not, hence we have no proof that animal matter is the agent, but to the contrary, every fact relative to the subject corroborates the contrary opinion.

Take any section of country where intermittents are rife, and the most remarkable features of it, will be stagnant water, in the form of a mill pond, marsh, or some other form. This is invariably the case, and no stagnant water to any extent is found without producing them; hence it is reasonable to infer that they bear the relation of cause and effect to each other

What are the circumstances most favorable to its production? upon this subject there is a contrariety of opinions. The celebrated John Brown of Edinburgh, asserts that,

"nothing is more certain than that cold and moisture are the chief powers inducing malaria" (vide Brouns Element p 200)

Dr Mackintosh assures us, ~~that~~ "that paroxysms of intermittents have taken place, from sudden change of atmosphere, in places where no miasm existed, and the most severe cold stage which ever came under his notice, and which lasted twenty six hours was produced by exposure to frost, after the individual had got wet on the top of a coach"

Stokes declares most unreservedly, that "cold and moisture are fully competent of producing ague independently of any miasm whatever".

That cold and moisture are not the chief powers inducing intermittents, and that they are not competent of producing and maintaining them, is proven by the observation of any one who takes the trouble to observe, and no one can be induced to believe what his observation

informs him is not the fact.

If this was the case, we should find them more rife in Boston, than in New Orleans, in winter than in summer, autumn and spring, among seamen, than among landsmen, in northern than in intertropical regions, none of which, but the reverse of all are true

This position of course denies the existence of any peculiar, or definite agent; it is supported by none however, who have derived their knowledge upon this subject from personal observation.

It appears from observation and from the best authority derived from various sections of the country, that stagnant water impregnated with putrefying vegetable matter; and moisture, and heat, at, at least 75 of Fahrenheit are necessarily present during its generation in quantities sufficient to produce intermittents.

Heat and moisture, unaccompanied with putrefying vegitable matter are not

competent. It is a remarkable fact, that the hottest part of the year is the healthiest in ordinary localities, where there is little or no stagnant water.

Different localities may under circumstances directly the reverse be affected alike. Suppose we have a section of high lands, but we other and an unusual quantity of rain, it is evident that this section which in a dry summer would not have the requisite quantity of water to produce putrefaction, will under those circumstances have the proper conditions present and intermittents will prevail there, although under ordinary circumstances such a thing as an intermittent was never known there before. Under these same circumstances, a section which in ordinary summers is rife with intermittents will now be healthy owing to the fact that the putrefying matter is inundated and thus rendered innocuous

Suppose now we have a dry summer and a section interspersed with stagnant pools, the ponds will in some measure dry up. and thus expose the surface of its putrid contents to the action of the sun and every circumstance will be favourable for the production of miasma.

This will account for the facts mentioned by many authors that some sections are infected with intermittents in dry & hot weather. which lead them to infer that heat was the agent producing this disease. but we observe that if there is no stagnant water present those hot, dry seasons are healthy

Lind states that in Senegal the hottest part of the year is the healthiest, also that it is the case near the great desert in Africa, in Guinea. Heat therefore alone is not competent to produce the effects which we assign to malaria

Neither are heat and moisture combined. It is evident that repels at

sea within the same climate

sea within the same climate are equally exposed to heat and moisture, with those habitations on land, and yet such a thing as an intermittent at sea is hardly known. We have numerous instances of vessels riding in safety, a few miles from shore, while miasma was producing most fatal effects on shore. Moisture and heat therefore, combined are not competent.

Show me a low flat country, interspersed with stagnant pools, and I will show you a country, where miasma manifests itself in hot and dry weather. Hence, as it occurs under this combination of circumstances in all places, and only under this combination, it is reasonable to infer that they are all necessary for its production.

There is a circumstance connected with the movement of miasma which appears difficult of explanation. In one place we find a dwelling situated in a low bottom

very sickly, while those on the elevated grounds hardly are healthy, and vice versa. Eberle has taken notice of this circumstance; he says "Koinomiasmata possess a specific gravity heavier than atmospheric air, (De Lisle) they cannot, consequently, ascend into the air without being attached to and carried up by lighter bodies; and these vehicles consist without doubt, of aqueous vapours. Hence persons sleeping in elevated chambers, are much less apt to contract miasmal diseases than such as are lodged on the ground floor, (Hunter on the diseases of Jamaica. Blane. Lempriere & Lisle) and hence, too, the greater salubrity of hills, and very elevated posts, than the adjoining low grounds. It is true that some remarkable exceptions have occurred to this fact; Bancroft mentions the great mortality which has repeatedly been observed on the top of Monte-fortune, at St. Lucie and on the hospital and Richmond

hills, at Grenada, while the surrounding low situations were comparatively salubrious?"

Drs O'Hallaran, Blane, Stokes and others mention similar facts. I can easily conceive of a continual breeze carrying the aqueous vapours, impregnated with miasma up a gradual declivity to any height, as easily as it could carry it along level ground; but that the low ground from whence it emanated should remain uninfected appears difficult of explanation.

Untill within a few years, writers confined the operations of miasma, to the production of intermitting and remitting fevers, and contagion was assigned as the cause of yellow. As light however, accumulated on this subject from observation, the opinion of the medical world became gradually revolutionized, and since the publication of Professor Potters memoir on Contagion in 1817, in which the perversely blind are made to see, this question has been consigned to rest.

No one now (save Sir Gilbert) of any eminence contends for the contagious character of Yellow fever. All now allow that miasma has the chief agency in its production

Does Typhus Fever arise from it. Dr John Armstrong, the most able writer on this disease thinks it does; he says "This investigation"; the investigation of its cause "has most decidedly led me to the conclusion, that what the Italians vaguely call Mal-aria, and the English as vaguely marsh effluvium, is the primary source of Typhus Fever". That malaria in many instances has some agency in the production of it, is highly probable, for we have an abundance of evidence of its remaining dormant in the system for months and then manifesting its effects; but that it is not the general cause of it is obvious from several facts. First it does not occur in miasmal sections any more abundantly than in others, Second, it is a disease of winter, or of cold & damp weather, or attacks

persons confined in cold damp cells, and generally occurs among the poor class, from their want of proper food and clothing.

persons confined in cold damp cells, and generally among the poorer class who are not able to procure proper food and clothing. Thirdly miasma at this season is thrown down by frost and consequently unopious.

Whether the disease, denomenated Plague, arises from miasma or no, seems to be a question subjudice, and many able advocates are found both pro & con. From what I have read upon the subject, and learned viva voce, I am inclined to believe it does.

Miasma manifests itself, when present, during the prevalence of most any disease, frequently materially modifying their character, and hence we have periodic Rheumatism. headache. blindness. deafness, diarrhoea, toothache &c. It will modify measles. scarlatina. and nearly all other diseases.

Is Malaria a passive or an active agent? The affirmative of this question seems to be supported but by few, but among those few are some of the brightest stars of the profession.

It has one in particular; whose profound erudition, known accuracy of observation, and unequalled experience; is well calculated to make the tyro hesitate to differ; but believing, as I do, that the position is untenable, and unsupported by sound logic, I beg to differ, though it is with the greatest deference.

Those who maintain this theory suppose that the effects can be accounted for, by supposing that it merely dilutes the atmosphere, and thereby depriving the lungs of their requisite quantity of oxygen.

It appears from Crawfords experiments that a healthy man consumes 1344 cubic inches of oxygen in a given time when the temperature is 54 of Fahrenheit, and 1220 in the same time at 79. in the same ratio at 98 he would consume but 1125. Now when the thermometer indicates this point which it frequently does for a month or more we see no intermittents in healthy sections of the country.

Now it is obvious that if any foreign substance be present in the atmosphere so as to dilute it ~~from~~ so this much it could be detected even by the eye, but as it really is, it cannot be detected by the most minute analysis, hence it is reasonable to conclude from this fact that it is not the case.

According to this theory, all millers Bark grinders, butchers, and especially dissectors, for certainly the air of their apartments is more highly impregnated with foreign matter, than the atmosphere is with miasma. The former can be detected even with the eye the latter cannot even by the most careful analysis

The dissecting room must be 50 times more highly impregnated than the most contracted form in which malaria exists. Another fact which goes to show that it is not a mere passive agent is, that it frequently remains dormant in the system for weeks, and even for months and then manifests itself:

This could not occur if it had no powers. It appears to me, that it is an active agent in itself; an actual and energetic poison, impinging first on the nerves, producing debility in them, which gives rise to functional derangement. and the rest of the system necessarily becomes disordered.

There has been much said as to how it gets into the system, and much said too, to no purpose. Some suppose it makes its first impression on the mucous membrane; others upon that of the lungs, and others upon that of the stomach. — Rapeau (vide the Philadelphia medical and Physical Journal No 7) contends that it produces its primary impression upon the olfactory nerves, in the same way that offensive odors produce nausea. In support of this opinion he adduces ~~two~~ and a number of experiments of an interesting character

"performed by himself in the presence of a number of ~~a number of~~ medical gentlemen". The nostrils were closed and the subject suffered to inhale fumes from tobacco alcohol &c for 15 or 20 minutes which produced no more effect than if they had been inhaling pure atmosphere; the nostrils were unclosed and the subject became deadly sick or inebriated in a few minutes. This is an interesting fact though I do not think there is any analogy between those fumes and miasma, for the latter possesses no odor, no more than lead and many other arsenic poisons.

Broussais. Supposes it acts locally on the stomach producing inflammation of this organ. There is but a small chance of its reaching this viscus in any considerable quantity through the medium of the atmosphere and the small quantity

intangled in the ingesta could not give rise to so much mischief, and moreover, subjects who die in the cold stage seldom have the stomach inflamed.

The lungs present the most mucous surface to the contact of the air and doubtless they are the principal avenue, through which it gets into the system. The Schnderian membrane, alimentary canal and the skin, especially the two forms, are doubtless secondary avenues.

An Inaugural Dissertation on Fractures

Submitted to the examination
Of the
Provost Regents & Faculty of Physic
Of the
University of Maryland.
For
the degree of Doctor of Medicine

By
Wm. H. Grimes
of Sharpsburg Wash. Co.
Md

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The importance of the present subject of itself, as well as in its relations to the other branches of Surgery, and the large, & interesting field of investigation which it presents, to every medical man, have determined me in its selection.

The Study of this branch of Surgery, so forces itself on our consideration by the frequency of its occurrence, their numerous complications, and the deformity or even fatal results which may arise from its mismanagement, that no Practitioner should be satisfied until he has made himself perfect master of their Pathology, Treatment &c, and for this, it is not merely necessary to understand the tissues primarily involved,

Almost every branch of medicine is connected with them, Physiology, Pathology

and above all Anatomy, must guide us in our Diagnosis, Prognosis, and Treatment. We should be acquainted with the whole train of morbid sympathies, and the nicest discrimination often becomes necessary, to determine between life & limb of our patient; & this is a point to which writers on Surgery, have never been able to fix precise rules, and it therefore becomes more necessary for the practitioner to be able to judge correctly for himself, upon this subject much may be said, but I have not here time or space to canvass it. We should always bear in mind however that some small risk should be incurred of the patients life rather than sacrifice so important a member as the Leg for instance,

Fractures doubtless must have been

among the first human misfortunes, for which surgical aid was demanded, which may be inferred from their rude pursuits. The rough instruments of war in use by them, formed more to break than pierce, their following the chase &c, all of which would favor the occurrence of fractures.

And it may indeed be imagined, with a good deal of plausibility, that these accidents from the obvious treatment which they required, as well as from the frequency of their occurrence gave the first foundation to the science of surgery. At first they were doubtless rudely treated, either by keeping the leg confined to one position without apparatus, or in some rude machine which was worse than none and gradually as age after age brought in this, as well as every thing else, it

progressive improvement, until we have now arrived at a degree of reality in treating these accidents, nearly perfect.

By the numerous ancient and modern writers, fractures have been variously defined, The most general & I think proper definition, is the most simple - A solution of continuity of bones. Produced either by external violence, direct or indirect, or by the powerful overcoming action of the muscles. The fragility of bones are dependant on many circumstances, as the age or peculiar idiosyncrasy of the patient - or on disease,

Bones are composed of an earthy matter, & of Gelatine, & their strength & power of resisting violence, depends on a proper proportion of these constituents, Cæteris paribus, as we ad-

-vance in age, the proportion of earthy matter increases, rapidly in childhood, because then the gelatine is in far too great proportion, & in children the solution of continuity, is seldom found, tho' we are frequently called to remedy a bent bone, gradually in growth & until it gives the bone a proper balance of both constituents & in manhood it is almost suspended, until the prime & vigor of life has passed, when the relative proportion of earthy matter increases rapidly, & we have in the old man, the bones fragile, in the extreme, & broken by the most trivial accidents, The relative states of the bone in the child & old man, may be compared very happily, to a green & dry stick, the one bending & being with difficulty broken, & the other snapping

without allowing any flexion.

In the diseases fragilitas & mollities ossium, we have the bone in one excessively brittle, in the other soft & pliable. The one, owing to the absorption or non secretion of gelatine, & the other, to the opposite condition of absorption or non secretion of earthy matter.

And in some constitutional diseases as cancerous affections, an extremely brittle condition of the bones occurs. Frequently also patients are met with who from some idiosyncrasy are very liable to have their bones fractured by small blows, & for this peculiarity we can only account, by supposing their bones too abundantly supplied with earthy matter.

In the young when dislocations of continuity do take place, it is apt to be the separation of the epiphises from the dia-

-physis, which may not yet be united by bony matter,

Fractures are divided into

1st Simple. When there is mere lesion of the bone, without any wound of the integuments communicating with the fracture. Though the nature and consequences of this variety, are in the main fully expressed by its name, Yet they are not fully free from danger, for with them may be accompanied a good deal of contusion in the soft parts externally, injuries of the profound structures & occasionally of the vessels, with consequent effusion & infiltration, in the cellular tissue and as a consequence of this gangrene may be apprehended,

2nd Compound, When together with the fractures, are accompanied a division of the superimposed integuments;

produced by a protrusion of one or both extremities of the fractured portion of bone,

3rd Comminuted, When the bone is broken at several places, & divided into fragments, it may be simple or compound comminuted,

4th Complicated, When the fracture is attended with some other accident, as a dislocation, or some constitutional disease, as mollities ossium, Syphilis or Scurvy -

Fractures are also divided according to the direction in which they are broken, into oblique, or transverse, the first, is most apt to occur when the bone is broken by the counterstroke, & when forces act on it in the direction of its axis. the last, from some direct force as the passage of a heavy body directly over the

seat of fracture, The first is most difficult to manage, for the obliquity makes the broken surface more extensive, & thus of course increases the difficulty of keeping the surfaces in apposition.

Those which I have given, with many others, are the divisions & distinctions which are met with in Surgical Books, It is to be doubted however whether attending too particularly to these minute distinctions, does not more embarrass than assist a young practitioner in his treatment of a case, though they certainly tend much to elucidate & distinguish the exact nature of the injury. There is a danger of our attending more to names, than diseases & probably surgical treatises would be both of more practical advantage to the student & tend more to advance the Scie-

tation of the authors, did they treat more fully & forcibly of the great principles, & less to the minutiæ of the particular diseases. Most works on Surgery for instance, tell us that the difficulties & dangers of a fracture, are much increased by the bones being much broken, or by a wound communicating with the integuments, and the knife, the saw & the forceps mingle freely in their descriptions.

All this is very well, but by it the young Surgeon's mind is disturbed, when such cases are brought before him, by images of the knife, & of the mutilations of parts, or of dangerous explorations in the region of important vessels and nerves.

But is it because a fracture is compound that amputation must be resorted to, or because it is complicated or comminuted, that fragments must be extracted,

this is by no means a general rule, The Principles of Surgery teach us that the dangers of compound fractures, consist in the access of external irritants, Guided by these principles, the prudent Surgeon will, if he, after carefully examining the chances pro & con, thinks it justifiable to endeavor to save the member, at once close the external wound, Nature heals it probably & the Surgeon has merely to treat a simple fracture, If then unhappily unpleasant symptoms arise, we must combat them & if we cannot then safely operate, the second period for operation still remains, So it is in comminuted fractures; General principles teach us not to cut down at once & remove the fractured portions, conscious that if enough of vitality still remains in the part, they will adhere & the continuity of the bone be restored,

& if not nature will perform her part, and the fragments will be thrown off as foreign bodies from the system.

The diagnosis of fractures when made shortly after the occurrence of the accident, is not difficult in general, unless the seat of the injury be near certain articulations, as the shoulder & hip joints in which case it may be confounded with dislocations. The kind of violence to which the limb has been subjected, the pain in the parts, with the loss of motion, and the peculiar grating sensation, termed by surgeons "crepitation" produced by proper manipulations of the broken bone, sufficiently concur to point out the nature of the injury.

But if sometime has occurred after the occurrence of the injury, & before the surgeon has been called upon to

institute an examination, the detection of the nature of the injury, is by no means so easy to be ascertained. In these cases, particularly when the producing cause has been of a violent character, tumefaction to a large extent ensues, the product of inflammation or of extravasation of blood into the soft parts, causing deformity of the member & pain too intense to permit a very free manipulation of the parts.

In these cases the practitioner will content himself with attending to present symptoms and by application to the member of cooling lotions & having relieve tumefaction & other symptoms, goes on to complete the investigation, the symptoms then occurring to aid the practitioner in his diagnosis, will most probably be a change of shape in

the member, & when remote from an articulations by an angular deformity which will present itself, upon making certain manipulations, Crepitation, also can generally now be made manifest. it is probably the best symptom which we have of the complete solution of continuity, & may be relied on as an unerring guide, if we except those few cases in which there may be existing at the time of the reception of the injury, a disease of the articulation entering into the formation of the nearest joint, - from the absence of the synovial secretion or some other cause, when crepitation here in some degree may be observed, another one which is chiefly useful in pointing out the difference between fractures & dislocations, is the great mobility of

the limb & the facility with which if the fracture be in a limb, we can move it in any direction, observing at the same time that some prominent point on the top of the bone does not turn with the lower portion,

In a treatment of a fracture, the surgeon has a very humble part to perform, though it is very important to assist nature — his object is to keep the parts perfectly steady until the formation by nature of the provisional tumour, and it is somewhat singular that when a bone is well secured by art, nature as it were aware that a temporary support is already given to the bone, goes on sooner & directs her whole energies to form the direct continuity of the bone, In thus steadying the members & keeping the bones in proper

-proper position in regard to each other. We have many difficulties to contend with, as the contraction of the muscles, causing overlapping of the ends of bone, or the sharp edge of one of the fragments, may be forcibly pulled up & pushing against some important vessel or nerve may cause serious evil; Many other deformities may also rise, either from internal or external causes, All of which can only be controlled by the greatest attention to the position of the patient and to the proper adjustment of our bandages,

It is impossible for me here to give the particular treatment of every fracture which can occur in the body, The chief indications have been already stated i.e perfect repose & guarding by bandages &c against the action of the muscles & this should be accomplished by as simple

an apparatus as possible, though in some as those of the clavicle for instance our applications are necessarily compli-cated, In others on the contrary no bandages are necessary as in fractures of the hand, foot & some fractures of the ribs, when by merely lying still & supported perhaps by pillows the patient will do well,

There is one fracture however of which I would wish more particularly to speak both on account of its frequency, importance, & difficulty of treatment & of the late very valuable improvements, which have been in the apparatus for treating it, I mean Fractures of the femur, The long bones, for very obvious reasons, are the most frequently broken, as from their length furnishing a lever, which enables a force to act on them with great advan-

-tage & from their exposed condition, neglecting as it were the Short bones,

Among the long bones none are more apt than the thigh bone to be broken, and the importance of these fractures & the difficulty of their treatment, is well shown by the number of apparatus which have been invented for their cure, Almost every Surgeon of eminence indeed has, not content with those in use before him, made one of his own

This bone is obnoxious to fracture in almost every portion, The very extremity of the head may be broken off, which is however generally in the young, by the detachment of the epiphysis, & this shows very conclusively, the fact that bone though separated from the rest of the body almost entirely does not die, for here the small ligamentum teres which cer-

- tainly cannot transmit much blood, is the only attachment which it has to the rest of the body, yet necrosis does not take place, and in the young & healthy subject we have union going on kindly,
This fracture is apt to be mistaken for a dislocation, by producing crepitation & observing the mobility of the limb we will not be deceived,
The bone may be broken in its neck & this is particularly liable to occur in old persons, & is generally produced by the counter stroke, here we have the leg turned outwards & the great tro-chanter drawn upwards,
By the counter stroke this bone is also sometimes broken obliquely through the base of the trochanter & in this as well as in that just below it we have manifest a considerable degree of enlargement and

deformity, the superior fragment being pulled upward,

In fractures near the middle of the bone, the principle danger is its overlapping & here there is another kind of mal adjustment to fear, the weight of the bone may cause it to touch only at the approximation, & thus renders perfect union uncertain & tedious.

Att near the condyles a peculiar kind of deformity is to be feared, the muscles of the leg which are attached to the under part of the condyles, pull the lower portion downwards,

These fractures are generally easily diagnosed by the rules which I have given heretofore, one difficulty may arise however which I have not stated. The bones may not be entirely separated from each other, & we must endeavor when this exists or when any shreds of

periosteum remain, not to break them loose by our roughness, for they will assist us a good deal in bringing about a happy issue,

The treatment as stated, is perfect rest, & approximation of the fractured ends of the bones, guarding against the contraction of the muscles, I have before alluded to the great variety of apparatus which are used or have been in use by which Surgeons have endeavored to obtain this object, for all have agreed as to what are the indications and only differ in the manner of fulfilling them, Sir Charles Bells apparatus, which has had much reputation in its time, is a large & ponderous one, which is intended by keeping up a continued traction on the leg to prevent the muscles from contracting, but by the contin-

nal traction & irritation which it keeps up by its improper adjustment & hard portions which press against the muscles, it defeats the very purpose for which it was intended, for we cannot prevent an irritated muscle from contracting, There are many other apparatus' and modifications but they all liable to the same objections nearly, as Potts, Desault's, Physicks modification of the latter &c.

An apparatus invented or modified by Dr Nathan R Smith, ~~the father of~~ our Prof: of Surgery & Anatomy seems to fulfil, far better than any other the indications in the treatment of these fractures, And is now almost unversally used in this country & is rejected only by those who from feelings which we cannot in too strong terms deprecate, allow their

professional pride to come before the suffrings or even limbs of their patients, This apparatus consists of a frame work made of wood & iron in which the limb is hung without allowing it to touch the hard part of the frame, it is a double inclined plane extending from the upper part of the hip inferiorly, down to the foot & it has a foot piece on wh the foot rests, this is swung by cords attached to screws wh are about half way down the fore leg, to the ceiling & this swinging of the apparatus is very important for being hung obliquely the string keeps up constant but gentle traction & this prevents that mal adjustment of the body which is so apt to occur by slipping down &c, The fractured limb is to be placed in this apparatus & it will if it be a simple fracture not even re-

-require any other adjustment, it will slip into its place & natural position with-out much trouble,

We place the leg in this splint, stuffing the interstices between the frame & leg with soft cushions & we have it very securely fixed, two cushions are placed at the knee and they are also fixed along the calf of the leg & keep the heel from resting on anything for usually this prominent part of the leg, suffers most,

The angle of the apparatus, can readily be changed & it may be depressed or rendered more acute by the screw at the bend, No bandages are required save one which attached to the upper part of the apparatus goes over the thigh & one which encircles the whole, on the outside & upper part of the splint there is a projecting arm which is of a good

deal of advantage, for it keeps the Splint in a line with the body.

This apparatus is applicable not only to fractures of the thigh but to those of any part of the leg.

Thus by this apparatus the treatment of these fractures is rendered more simple & plain than by any other which has been used. Its advantages are so obvious as to need no further pointing out.

Of late years an apparatus has obtained quite a reputation, called the Permanent apparatus. This is very highly approved of by our Professor of Surgery Dr Smith, and from its simplicity, cheapness and readiness of being procured or made as well as from the admirable, firm & equal support which it gives to the limb, it is destined I

think to take a high stand in the treatment of these fractures & indeed to those of the lower part of the leg & even other limbs, this does not appear to answer well however in fractures of the neck & head of the bone, and should never be employed until we have subdued the inflammation & consequent tumefaction which may accompany the fracture,

It is thus formed, the limb is first bandaged well from the foot to the hip & some turns carried around the loins, this is well lubricated with paste and strips of pasteboard being cut so as to shape it when moist to the limb, one must be placed on each side of the leg & past the knee, the one on the top only extending to that articulation, another extends along the toe part of

the skin, no pasteboard is to be put on the lower part so that the limb rests on a soft portion of about 2 inches & a half. another layer of bandage & again the pasteboard is applied, and another bandage is put over the whole, The limb must be more or less flexed on the application of this apparatus,

You have then a beautiful apparatus, holding the bone very firmly and exercising firm & uniform pressure on the different parts of the limb, and it is very prominent, and will remain on the limb almost indefinitely, adapting itself exactly to the shape of the limb & fitting it as a lobster's shell fits its inhabitant,

An
Inaugural Dissertation
On
Menstruation
Submitted
To
The Examination
of
The Provost, Regents and Faculty of Physic
of
The University of Maryland
for
The degree of Doctor of Medicine
by
William H. Bordley
Queen Anns County
E. S. Maryland
Feb. 14th 1842

To Prof. R. Potter, this dissertation is inscribed, as a very slight but sincere mark of gratitude for his unremitting kindness, by

his obliged servant
the author

Introduction

As it becomes obligatory upon me, as a candidate for graduation, to submit a thesis to the faculty of the University of M-d, for their consideration, it may not be improper, before proceeding to the discussion of the subject I have selected for this essay, to state, that I am as almost all students are, indebted solely and entirely to the labor, and experience, of my medical teachers, and the different medical authors, for whatever information I may have on any subject connected with the science of medicine; for there are but few students who have had frequent and extensive opportunities of examining and studying the progress, treatment, and pathology of diseases. It cannot therefore be expected, that one, who has enjoyed no opportunities of this nature, should by any possibility, save intuition, offer any opinion calculated

to unravel the mysteries of physiology, or to illuminate the almost impenetrable obscurity of pathology.

With these remarks, intended as an apology for the absence of any thing more strikingly correct or novel, than can be found in the various essays upon this function, I shall proceed to offer a few observations upon the physiology of Menstruation — notwithstanding after they are finished, they may be obnoxious to the same criticism, that Hudibras passed upon Ralpho's long harangue upon Synods and bears, —

"Much than has said, which I know where
And when, than stolest from other men,
Whereby 'tis plain thy lights and gifts
Are all but plagiary shifts."

The
Physiology of Menstruation

Until the age of puberty the female exhibits the same moral character and personal development, independent of sexual organization, that we observe in the male previous to this period; at this time however a remarkable and extraordinary metamorphosis occurs, not only in the physical appearance, but also in the moral feelings and social habits.
The development of the system is suddenly and beautifully finished; every angle so rounded and moulded as to be perfectly graceful; the voice becomes more subdued and soft; the breast more full and prominent; the gait, owing to the enlargement of the pelvis, more attractive from its apparent weakness, commanding our admiration, and enforcing our protection; the eyes, "which" "are" to use the language of Velpeau[1] "at once brilliant and languishing, express commingled

[1] Velpeaus Midwifery

desires, fears and tenderness". The feelings from the operation of some mysterious power bringing into play a new set of organs, destined hereafter to exert a powerful and irresistible control over the female system, but which until now had been almost useless — undergo like the body a strange and almost unaccountable change, rendering her manners and actions timid and reserved, gentle and subdued. The thoughtless child is transformed into the thoughtful woman, with a form so faultlessly perfect, as to put to the blush the most lifelike and masterly production of the painter or the poet. "In fact a new being is almost created". (Dewees diseases of Females).

Whilst these revolutions are going on in the general system, the generative organs also undergo a marked and peculiar change; the ovaria, the uterus and vagina become more largely and perfectly developed; the parts about the pubes become more full and prominent, and at the same time covered with hair. In the midst of these changes so full of interest to the female, the catamenial discharge, with more or less pain and difficulty, makes its appearance,

which when properly and healthfully eliminated, renders her competent to enjoy the pleasures, and perform the duties both of wife and mother; but when unhealthily, frequently like the breath of the pestilent simoom blights her brightest hopes and fondest wishes. It is on this account that a proper and correct knowledge of the pathological, as well as physiological conditions of this function, becomes of such paramount interest and study to every humane and intelligent physician.

The Catamenia is that fluid resembling blood somewhat in its color, which is discharged, usually every twenty eight or thirty days, from the uterus of the human female — except when interrupted by pregnancy, lactation, or disease — from the age of puberty, which in this Country generally occurs about the thirteenth or sixteenth year, until the "critical period," which is about the thirty ninth or forty fifth year, at which time it entirely disappears. Many circumstances however, as already hinted, may accelerate or retard the first appearance of the Catamenia; thus from the excessive heat of tropical climates it occurs as early as the

sixth or seventh and rarely later than the twelfth year; on the other hand, in very northern latitudes, owing to the diminished intensity of this exciting agent, the female does not become marriageable until the Eighteenth or twentieth year. In fact any thing calculated to excite or stimulate the mind or body, as reading highly wrought amatory writings, gazing upon indelicate and lascivious paintings, entering society at an early age, and luxurious and indolent habits: a city life (where all these exciting causes are readily found) like a residence in warm climates, invite the early occurrence of this secretion; whereas a quiet, innocent and unexciting life, as that found in the calm and retired country, - where there is none of the refined and fashionable immorality and dissipation of a populous city to arouse and develope the sleeping desires of the child, - allows this function to remain unestablished until the female is capable of performing the moral as well as the physical duties of a woman.

I have now mentioned the average age, at which this secretion usually makes its first appearance, and stated

the causes, independent of climate, which procrastinate or accelerate its occurrence; there are irregularities however, mentioned by almost every writer, for which no ingenuity or learning can satisfactorily account; thus children have been known who were "born regular", others to become so, at one, two, three, or four years, and so on, to the regular age; and on the opposite extreme, old children have become marriageable at the early age of seventy, Eighty, Ninety and even a hundred years. How these anomalies can be explained, I know not, unless they be considered rather, as cases of uterine hæmorrhage, than true instances of precocious or protracted menstruation.

Independent of these general signs, as the evolution of the different parts of the system already mentioned, the first eruption of the menses is indicated by lassitude; slight head-ache; increased arterial action; loss of appetite; fullness about the mammæ; pain, throbbing and a bearing down sensation about the loins and pelvic cavity; and sometimes attended by a "slight pruritus of the sexual parts;" (Belpeire) these symptoms usually continue for two or three days, at the

end of which time a watery mucous fluid, apparently tinged with blood, is observed to drop from the vagina, on the first day very slowly and of a pale color; on the second and third more copiously and of a deeper red, then gradually diminishing in its quantity and the intensity of its color, until it entirely disappears, which generally happens on the fourth day, occasionally sooner, and in some rare instances not until the eighth or tenth day.

The quantity discharged during this period, has been variously estimated by different writers, some stating two ounces to be the average quantity, others twenty. It is now however, usually thought to vary from three to six ounces. It appears impossible that any two authors would agree perfectly as to the quantity evacuated, since there are so many circumstances liable to increase or diminish its amount, as climate (in tropical climates being more copious than in colder regions;) mode of life; idiosyncrasy, etc; it is also more scanty for the first three or four accessions than when permanently and completely established. Until its perfect establishment its returns are irregular and uncertain,

after this however they are remarkably regular, recurring about every twenty eight days; to this law, which is a general one, there are striking exceptions, as those in which it occurs every thirteenth or fourteenth day, and in others not happening more frequently, than on the thirty fifth or thirty seventh day, without any apparent ill effects upon the health of the female.
These variations do not appear in the same individual, for each has generally a fixed and invariable period, peculiar to herself; whether it be longer or shorter than the usual interval, of twenty eight days, alters not the regularity of its return, which in some instances is so remarkably punctual, that the female can calculate, with great precision, upon the very hour of its recurrence, and almost every one, in whose this function is healthfully performed, can tell the day on which to expect it.

This secretion was at one time, considered so deleterious to animal and vegetable life and matter, that writers have felt themselves justified in stating, that females, whilst menstruating, would by their approach, destroy a hive of bees; turn wine and milk

seeds, blight and wither the flowers of a garden, render fruit trees unproductive, &c. It is hardly necessary to say, that this is not the fact, as this discharge is now, by all the inhabitants, both learned and illiterate, of civilized countries, know to be perfectly innocuous, except under certain diseased conditions, when it becomes sufficiently acrid, to excoriate the parts through which it passes; but even under these circumstances, it exerts no injurious influence upon the lives of animals or vegetables. Dunglison[1], Dewees[2], Meigs[3] and others seem to think, that the doctrine of its poisonous qualities originated in a great degree, from the strictness of the levitical law, for regulating the conduct of females during Menstruation;. This may be the case, but it appears very evident that Moses had, no idea, that the Israelites considered it so destructive to animal or vegetable existence, or why the necessity of publishing the ordinance contained in Lev. C. 20th V. 18.

It may perhaps have been observed,

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1. Dunglison's human Physiology. 2. (Dewees's) females, diseases of.
3. Meigs's Midwifery.

from the use of the term secretion in reference to the catamenial fluid, that I adopt the views of J. Mason Good[1], Blundell,[2] Dewees, Denman[3], Davidge[4], Hunter, Ashwell, Haller, Bordeau, Rush and Prof R. W. Hall in considering this fluid a true secretion, and not a discharge of pure blood, as is asserted by Velpeau, Meigs, Mad. Boivin, Cullen, Richerand, etc. That it is a secretion and not blood, appears clear, from the following facts; 1st because, even those who contend for its sanguinous character, admit that it does not exhibit all the properties of real blood; 2nd because, it does not separate into parts, neither does it coagulate like blood; and lastly because, it does not contain globules, and, according to the analysis of Brande, differs in its chemical composition from blood. It is needless to say more upon this point, as its secretory character is now admitted by almost every writer.

That this function has, ever since the creation of man, been essential and natural

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[1] J. Mason Good's study of Medicine. [2] diseases of Women. [3] Medicinal & Inaugural Thesis.

to a perfectly healthy and productive female is, as far as I know, admitted by every naturalist, except Roussel, Emmet, and Aubert who assert, that it is one of the consequences of civilisation, intended as a drain to the system of those, who spend their lives in voluptuous pleasures and in indolent and luxurious habits. That this is not the origin, appears evident, from the fact, that women were obnoxious to this discharge in the most remote ages, of which we have any record, as may be seen by reading the Mosaical law — the most ancient of all writings; — and also ~~because~~ from the fact, that the most savage and barbarous nations, — those who have no opportunity of forming artificial, or even of sufficiently gratifying their natural, appetites, — are subject to this monthly evacuation; and lastly because, no drain of a similar use, has been superinduced upon the economy of the male, who being far more dissipated and extravagant in their habits, appear at least as much in necessity of such an antiphlogistic discharge, as the less luxurious female. This theory or vision seems to me so entirely groundless and absurd, as scarcely to

require serious refutation; and should rather be mentioned to show upon what a "baseless fabric", men will attempt to rear a theory, for the belief and support of their cotemporaries and successors.

The question whether this function be peculiar and natural alone to the human female, or possessed by her, in common with the females of other species of animals, has been frequently agitated, and from the almost equal division of authority, on this subject, both as regard number and respectability, it is almost impossible to come to any fair and definite decision. Notwithstanding Velpeau and a great number of others, among whom I may mention Prof R. Wilmot Hall, assert that the orang-outang, monkey and bat, have a discharge analogous to the menstrua[1] and Locock[1], who goes further, and states, that "this cutation is analogous to heat in the inferior animals", I am inclined to believe, that Dunglison, Dewees, Meigs, Blundell, &c, who contend that it belongs exclusively to the human female, are nearer the truth. Upon this subject Meigs makes among

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1 Article on Menstruation, in the Cyclopædia of pract. Med — G Locock

others, the following remarks, "I hear repeat-very distinctly that women only menstruate; yet many other mammalia have regular erotic periods or seasons, which are marked among other symptoms by a sanguineous discharge from the genitalia, an evidence of the preparedness of the system for the reproductive processes".
They resemble each other so far, that they both appear essential to the fecundity of the system. However their effects upon the venereal feelings appear to be directly of an opposite character, for this secretion from the inferior animals seems greatly to exalt, or rather I might with more correctness say, to create entirely the desire for the male, as we know most animals will not allow the male to have any communication with them, except during the continuance of this discharge, when their salacity becomes so insatiable, that this period has been not improperly called the "heat." This is far from being the case in the human female, as no one will contend for a moment, that she becomes more lascivious during the evacuation of the catamenia, for on the contrary, it is known, that she is less

disposed to sexual indulgence at this period, than at any other, whether it be from the absence of the erotic erethism, from a fear of injury[1]; or from an unwillingness to expose the mysteries of her sex, I know not, but that she will not indulge in sexual intercourse, whilst her "sickness" is upon her, is a fact commonly and popularly known.

All physiologists agree that this discharge proceeds from the inner surface of the uterus; but whilst some as Dewees, Davidge, Gooch, Meigs, Blundell, and Hunter contend, that it is eliminated solely from this viscus, others as Velpeau, Prof. Hall and Churchill, assert that it is also evacuated from the os tinea and the internal membrane of the vagina; Velpeau and Prof. Hall believe it to be the natural

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[1] "Either by accident, or criminal impatience sexual intercourse has sometimes been permitted during the period of menstruation; and although not constantly, yet such conduct has been frequently followed by the most serious effects — generally by profuse hemorrhage; at other times by a sudden suppression of the discharge; to which have succeeded fever, delirium &c" Gooch article on Menstruation in the Cyclopædia of practical Med.

and normal function of both vagina and uterus, whereas Churchill believes that when the vagina does secrete this fluid, it should be considered, as dependent upon a vicarious action, such as gives rise to menstrual hemorrhage from the nose, eyes, ears, &c rather than the result of the proper and peculiar action of the vessels of the vagina; and the latter author to prove that this fluid, is under some circumstances, furnished entirely from the vagina, reports the case of a girl, who menstruated regularly after her uterus had been removed by Dr. Chas. Johnson. In confirmation of this statement, I may refer to four cases of extirpated uterus, recorded by Blundell; in two of which at least the menses made their appearance, although not until after the lapse of three or four years; upon these cases he makes the following observations, "if the uterus is in this manner thoroughly extirpated, the catamenia are not to be expected except perhaps, a little "show," the vagina menstruating vicariously as it is called, taken upon itself the office of the uterus."

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1 Blundell on diseases of Women.

If the cases alluded to above be correct of which there can be no reasonable doubt, it is clear and undeniable that the menstrual fluid may under certain conditions of the uterine system, be evacuated from the mucous membrane of the vagina; nevertheless it does not appear so evident, that it is always or usually poured from the vagina, as well as from the womb. If we deny that the vagina can secrete this fluid, (whether vicariously or not is of no importance) how can we account for the occurrence of the catamenia during the whole term of uterine gestation? Although the catamenia might be supposed to proceed from the uterus, during the early months of gestation, whilst the embryo is small and occupies the fundus of the womb, it would appear

cases of this character, and others in which the menses continued until the third, fourth, and so on, until the ninth month of pregnancy are reported by Blundell, Dewees, Dunglison, Gooch, Belfrage, Churchill etc &c

somewhat inadmissable to assert, that this fluid could by any possible natural means, escape from the cavity of the uterus, when entirely filled by the fœtus and its appendages, and also when the os-uteri is firmly and perfectly closed by a glutinous cement, as at the seventh, eighth or ninth month. Dr Jas Hamilton denies the correctness of the statement, that the vagina does or can, at any time, secrete the menses, and also that they occur during pregnancy; he remarks however that he has known a slight discharge in individuals of relaxed habits, about the usual period of menstruation, but "he has invariably found marked discrepances, distinguishing such appearances from the natural periodical discharge"[1]. From my own observations, which are very limited, I am unable to decide either way, but judging from the great number and standing of those writers, who have seen and reported cases of this nature, I am compelled to believe that a discharge resembling in every respect, the menstrual does appear during not only the first months,

1 Pract. observations on Midwifery by Jas. Hamilton

but during the whole term of gestation, and from what has been before stated it will be seen, that I consider it as an evacuation under these circumstances, from the vagina and not from the uterus.

Men of every variety of talent and learning have taxed their ingenuity and tired their imaginations to discover, upon what physiological condition of the system, this secretion depends. Some soaring on fancyes rather than on reasons wings, have sought an explanation in the monthly revolutions of the changing moon, which from the time of Aristotle unties now has been the baseless, but the fertile, source of the most opposite and visionary theories;[1] others less

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1 Pope has very happily in the following lines satirised this popular superstition in regard to lunar influence.

There heroes' wits are kept in pond'rous vases
And beaux' in snuff-boxes and tweezer cases;
There broken vows and death-bed alms are found,
And lovers' hearts with ends of ribband bound;
The courtier's promises, and the sick man's prayers

the

poetical but equally visionary have ascribed it, to a fermentation of the fluids, a nitro-aerial vapour, a redundance of bile, an amorous phlogosis, force of habit, &c: all these theories are too evidently fanciful and groundless to need any refutation; others again, with more plausibility, ascribe it to a general plethora, which occurs at the age of puberty — the period of complete development — from that portion of the blood, which was heretofore required for the growth and increase of the system, now no longer necessary — accumulates in such superabundant quantities, as to threaten, unless thrown off by some organ, dangerous and even fatal consequences. The uterus is, according to this theory, the only organ possessed of sufficient intelligence, to be entrusted with the important office of relieving the system from impending danger, which it effects by a periodical monthly evacuation. This explanation cannot be admitted, until some analogous evacuation

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The smiles of harlots, and the tears of heirs,
Cages for gnats, and chains to yoke a flea,
Dried butterflies, and tomes of casuistry.

shall be shown in one or the other of the different functions of the male system, or some satisfactory reason be given for its absence, as it would appear equally indispensable, that the system of man should have some mode of removing this general plethora, which, if this theory be true, must unavoidably happen. Neither can general plethora, in the language of Dr Meigs, "be its cause in those females who, notwithstanding very great weakness and exhaustion, continue to witness the regular return of the flow". This fact is of itself sufficient to refute this doctrine, therefore it is useless to add any further remarks.

The doctrine of local plethora as the primary cause of this secretion, seems equally untenable, but that there is engorgement of the blood vessels of the womb previous to the discharge of the catamenial fluid, cannot be denied, for if no more blood circulated through this organ than was necessary for its nourishment, from whence could the arteries obtain this fluid? This congestion however is not the cause of the discharge of the menstrual blood, but only the consequence of the primary operation of the ovaria upon the vessels of the uterus, which produces that state of the

womb, which results in the secretion of the catamenia. That this action is owing to the influence which the ovaria exert over the sexual organs, is now acknowledged by every physiologist; this opinion is corroborated and confirmed by the disappearance of the menses in those females, whose ovaries have been removed, or so diseased as to be rendered inadequate to healthy action. If this secretion be not dependent upon the operation of the ovaries upon the uterus, why does their removal in every instance check forever after this discharge? Upon this subject Meigs makes the following remarks, "women deprived of the ovaria neither menstruate nor bear children;" and again he says, "I apprehend that we shall not be very wide of the truth in supposing that a periodical excitation of the ovaria is communicated to the uterus itself, and results in the effusion from its vessels of a sanguine fluid, once a month." Why the ovaria should excite the vessels of the uterus, at regular periods of usually twenty eight days, physiologists have been unable to determine. It appears to me that as conception almost invariably takes place, according to the observations of Prof. Hall as well as those of numerous writers, within two

weeks after a menstrual period; that reasoning from analogy, it would seem, that the further we advanced from this period, the more rarely would impregnation happen; until after the lapse of a few weeks, it would be altogether impracticable, without the recurrence of this discharge, which appears to be the cause, or the sign, of the susceptibility of the system to the prolific influence of the semen masculinum. If this reasoning be correct, then if the catamenia should only occur semi-annually instead of monthly, there would be but eight or ten weeks out of the fifty two, during the continuance of which the female ~~would~~ might be impregnated; ~~which~~ this would have a great tendency to prevent the continuance of the human race. But this is explaining nothing, for we cannot tell why the female system was so organised as to be indebted to the monthly recurrence of this discharge, for its prolific capacity. That it is so we know, but why it should be so we know not, and we admit our ignorance, when we say it is owing to a fixed and inscrutable law impressed upon the female economy by the Creator.

Is menstruation a "sine qua non" to the fecundity of the female? This is a question which has puzzled the ingenuity and divided the opinion of physiologists of every age, and perhaps will ever do so, therefore it becomes a young man, of my limited experience, to approach with great diffidence a subject, about which so many distinguished men have disagreed; nevertheless I cannot refrain from expressing my belief, in the correctness of the opinion, advanced by Denman,[1] Cambell &c, and particularly advocated by Dewees, that conceptions cannot take place before the first appearance, during the unnatural suppression, or after the final disappearance, of the menses. To controvert this opinion, many cases of impregnation, apparently under all these states of the uterine system, have been reported by various

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[1] Denman after stating the different opinions of authors on this subject, makes the following remarks, "Observation has fully proved that women who do not menstruate from the uterus, or who are not in a state disposed to menstruate, cannot conceive" (Denman's Midwifery)

writers. To remove their force, by showing the great probability of their incorrectness, Dewees cites the following case; which fell under his own observation; He was called to see a child one year old, whose mother was sixty one years old, and had ceased menstruating in her forty fifth year; he states, that from the novelty of this case, he was induced to make particular enquiry, and upon questioning her washerwoman, she informed him, that this woman's linen, for the last two years, had given monthly evidence of the return of the catamenia; which although not as red as it usually is, was "sufficiently so to excite attention". "Now this case" he remarks: "would certainly have passed for an instance of impregnation after the menses had ceased, and it must be admitted

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[1] Meigs states that "persons are occasionly met with in whom after their cessation for years, they have reappeared, like the new teeth, new sight, and restored hearing, now and then recorded of aged people". (Prac. of Midwifery)

Velpeau, Dewees, &c mention instances of a similar character.

to be one very way calculated to deceive. I have therefore concluded that the cases upon record, purporting to be of this kind, may have been similar to the one now related? All the cases of fecundation reported as occurring during these abnormal conditions of the uterine system, may be accounted for upon the supposition of a want of sufficiently close and remote investigation, on the part of the observers — the catamenia appearing, but so slightly coloured as to be unnoticed even by the female herself — as was evidently the case in the instance mentioned by Dr. Dewees. I will assume that this explanation is admissable, otherwise it would be worse than useless to attempt the refutation of a doctrine, so supported and confirmed by apparent facts. It may be as well to state here, that a healthy condition of the catamenial function, is admitted by every writer, as a general rule, to be necessary to a productive female, thus Velpeau remarks, and all the authors I have had an opportunity of consulting — which the kindness of Dr. A. C. Robinson has rendered somewhat extensive — corroborate the statement, that women who do not

menstruate are often found to be sterile, because in either case something is wrong in the state of the genital organs;" He however states, and in this also he is sustained by almost all authors, that "the absence of the menses does not produce sterility". Notwithstanding it appears to be very evident, that if the genital organs be so diseased, as to be incapable of secreting the catamenia, they cannot be competent to prepare the decidua and ovum, and to furnish healthy and proper fluids for their support;— Whether this derangement be owing to disease of the ovaria, Uterus, or to both, alters not the justness of the conclusion.— If when the uterine system is so slightly deranged in its function, as to appear perfectly healthy in its operations,— the catamenia being regularly secreted, appearing natural in color, quantity &c— impregnation cannot be effected, upon what law of the animal economy, or impression of common sense, can it be supposed to occur, when this system is so materially and strikingly diseased, that it cannot eliminate the menstrual fluid, which is acknowledged by every physiologist, as a general law, to be necessary,

and preparatory, to conception? Upon this point Dewees makes the following correct and conclusive remarks, "it will not be disputed, that a part cannot perform its peculiar and appropriate action, until such part is completely developed, or its organisation perfected?; again "a perfect action cannot be expected from an imperfect organ, and it will be further granted, that no process in the human system requires greater perfection of organs than those subservient to generation". Besides these, there are other reasons of a more metaphysical character however, which tend very much to strengthen the opinion, that a perfectly healthy condition of the menses, is indispensable to a productive female. It appears contrary to the wisdom, and incompatible with the benevolence, of the Author of Nature, to suppose that, He would impress upon the system of the female this function - at once troublesome, disgusting and loathsome - but for some great and important end. The importance of its use, whatever it may be, must be granted, and until some other end equally essentially to the health of the female be shown, we must admit, that it is necessary, indispensably so, to

These lines were accidently omitted

in another, and thus on, until it would be necessary
in no instance, consequently we should be forced
to believe that it is an unnecessary

the prolific capacity of the woman. The force of this conclusion cannot be avoided by granting its necessity, in nearly every case, if a healthy state of this function, be not entirely and absolutely essential in every instance, how can we, by any possible mode of reasoning, make it so in any one given case. If all females are alike in the general features of their organisation, we cannot dispense with it in one case, without admitting it might be unnecessary. Insert the opposite lines source of annoyance, stamped upon the economy of the female, by the Creator, without "aim or end". Can the food be digested without the operation of the gastric juice? or can we contract a muscle, when the nerves, which convey the stimulus of the will, have been removed? To these queries, every physiologist would unhesitatingly answer no, and, why cannot the same confidence be placed in the immutability of those laws, which regulate the reproductive system of the female?

The female is generally obnoxious to this evacuation for a period of twenty Eight or thirty years; if it appears early, it ceases sooner, thus in very

note! I fear these arguments are very ambiguously expressed, but to be more

warm climates, it disappears about the thirty fifth or thirty ninth year; if it commences at a late period, it continues for a correspondingly longer time, so that in very northern latitudes, it remains until the forty fifth, or fiftieth year. For three or four periods before the final disappearance of the catamenia, they frequently become irregular, both as regards periodicity and quantity, frequently anticipating, and as often delaying, the time of their usual reccurrence. They however frequently cease suddenly, without any of the premonitory symptoms, which so often characterises this stage of female life, as irregularity, headache, restlessness &c. Their returns, and the quantity discharged, are generally so uncertain and variable for some time before their ultimate cessation, that this stage of female existence, has been not inaptly termed the "Lodging" period.

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clear, would render this essay longer than my limits will allow. If any one should, by chance, read this thesis and feel any disposition to know more on this point, I can refer them to Dewees "Diseases of females" for further information.

The appearance and character of the female, after the final cessation of the catamenia are greatly altered. They loose the grace and mildness of manners, the softness and the smoothness of the skin, the roundness and fullness of the person, which distinguished them, from the opposite sex, from the period of puberty, to this time. The ovaria also undergo a change, becoming small, shriveled and botryoidal in appearance.

Meigs seems to think that after this period the amorous propensities of the menstruating female disappear, & her passions again sleep as in childhood. If such be the case, any subsequent indulgence in sexual intercourse, must be received as dictated by an inveterate habit — as mental stimulus — rather than by the urgency of natural passion.

I purposed in this thesis to give a concise and general sketch of the various modifications, which the presence of the catamenial discharge, renders necessary in the management — of different — diseases, as well as the symptoms and treatment of the multiform disorders, which arise from the various derangements of this function, but after finishing the physiological history of menstruation, I find

it impracticable to do so, without extending this essay far beyond the usual limits of an inaugural dissertation. Before concluding however, I cannot refrain from expressing the many and great obligations I am under to the Faculty of the University of Maryland, for their uniform and unmerited kindness, during my attention upon their several courses of lectures.

For which the only return I can make, is the assurance that if a persevering attention to professional studies, and a firm adherence to moral rectitude, can prevent, they shall never have cause to blush for having bestowed this confidence on one unworthy of their kindness.

Finis

An
Inaugural Dissertation
On
Morbid Sensibility of the
Stomach and Intestines,
Submitted to the examination of the
Provost Regents & Faculty of Physic
of the
University of Maryland,
for the degree of
Doctor of Medicine
By
William Joseph Digges
of the
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Morbid Sensibility of the Stomach and Bowels.

The alimentary canal and other organs of digestion contained in the abdominal cavity are so constantly exposed to every variety of the causes of disease, and so frequently the seat of the most dreadful and distressing of human maladies, that the abdomen has been not inaptly called the storehouse of disease. Those organs being so important for the functions of animal and organic life; each performing its necessary office in the workings of the great machine, like the wheels of a watch; if one be deranged the regularity of the movements of all the others is destroyed, bringing with their derangement not only a loss of reciprocal ratio of power amongst themselves, but by their extensive sympathies inducing diseased action in other parts even the most remote; which upon a superficial view would seem scarcely possible to be so affected.

But when we consider the functions of the nervous system connecting each and every part; that all parts, the most distant and those differing entirely in their functions, are supplied from the same source of nutrition, we can easily conceive how even a small and comparatively unimportant organ under diseased action may destroy the balance of power between those two grand systems, the nervous and vascular, upon the due ratio of the powers of which, the regularity of all the movements in the animal economy depends, & bring into sympathetic disorder other parts, dissimilar in function and structure. Of the great variety of disorders that attack the abdominal viscera, those of the stomach and bowels are the most important, because most frequent, their very great frequency arising from their being excited by causes constantly acting — I purpose in this dissertation to treat of that affection of the alimentary canal which Dr. James Johnson has very appropriately called morbid sensibility of the stomach and bowels. My mind has been drawn to this subject, perhaps, because I have seen more

of it than any other of the long catalogue of human maladies; for, I venture to assert that not less than half of those who appear healthy, and probably think themselves so, disregarding its slow and stealthy approach, going about their daily avocations without making any change in their mode of living on account of it, are affected, more or less, by this disease, the most insidious of all others in its approach, and whose premonitions are too frequently disregarded until it produces functional and organic derangement, which imbitters and renders miserable the succeeding life of the unfortunate individual so affected.

It is a task perhaps almost impossible to describe every feature of this disease, whose forms are as various as the faces of those it attacks; whose modes of expression, even in the same individual at different times, are as changeable as the winds of heaven, and like them too, governed by the appointed causes of natural effects which are often inscrutable to the comprehension of man. It never perhaps falls ~~falls~~ to the lot of a gp, or the most varied and extensive experience even

to have observed this disease in all its forms. The oldest practitioner may be thrown off his guard by the strange masks it sometimes wears, & think that he looks upon a stranger when he is view=
=ing an old acquaintance with a new face—
Like death of which it is but too often the faithful herald we may say with the ancient poet—
Æquo pulsat pede pauperum tabernas
Regumque turres— — No age, sex or condi=
=tion of life is exempt from its ravages.—
Let it not be misunderstood that I speak of Dyspep=
=sia, which at best is but an imperfectly defined term, and according to what I conceive to be its best definition is a difficulty of digestion, accompanied with debility of the organs concerned; and can therefore only be considered as a symp=
=tom of morbid sensibility of the stomach and bowels, supervening in the advanced stage—
What I intend to designate by the term mor=
=bid sensibility of the stomach and bowels is but an exalted irritability of the nervous extremities of the alimentary surfaces, causing at first, perhaps only very slight uneasiness after

taking food: mild, so very trifling that the person scarcely observes it at all, or if his mind be otherwise occupied he forgets it entirely, & feels no more of it until his next meal. This state of things may exist for a longer or shorter time without attracting attention, and seemingly of no consequence. Then come sensations of a more distressing character, head-ache, vertigo and a weakness after meals, with slight irritability of the heart upon even moderate exercise upon a full stomach - If the morbid sensibility be confined to the stomach alone, these feelings of uneasiness, which are excited by food, generally pass off after a few hours, and trouble the patient no more until he errs again in diet; or I may rather say until his next meal; for, any of the aliments in common use in such a state of the stomach constitute errors in diet, unless taken in much smaller quantities than usual - Frequently the stomach is not so much the seat of this affection as the upper intestines. Whenever that is the case, digestion may appear to go on very well until the food leaves the stomach and comes in contact with the more irritable surface of

of the intestines, and then very nearly the same symptoms supervene as attend the affection when seated in the stomach, Cepalalgia, borborygmi, flatus and Colick pains - The tongue and pulse however, do not always present the same phenomena as when the disease is in the stom=ach - Woe to the unfortunate individual who shall neglect these warnings! Woe to him, who under such circumstances will persevere in his usual diet without diminution of quantity, regardless of consequences! These are symptoms that may be temporarily alleviated by Cordial drinks or a glass of some stimulating fluid, whilst at the same time those grateful aromatics, though they appear to soothe, are laying the foundation for a deep, and I may add an incurable disease when they are used to cover excess, or rather when they are daily used to obviate the disagreable effects of too large a dinner, or one of a quality to awake the morbid sensibility of the alimen=tary canal - This first stage or mild form of the disease cannot continue very long: Tis at this periods that a few days perhaps of abste=

=nence and prudence in diet will accomplish a cure, assisted by a mild laxative to carry off and correct the secretions, which may be supposed to be morbid even at this early stage. Let these be neglected however, as they too frequently are then a train of harassing symptoms present themselves. The liver, by its contiguity and connexion in function with the intestinal surface, becomes involved in the dis=ease; head ache increases, uneasiness in the epigastrium, if it has existed before, is aggrava=ted; there is a sense of tension across the upper part of the belly: pyrosis, and finally all the symptoms of dyspepsia show themselves, with constricted or relaxed bowels, or alter=nately constricted and relaxed. Soon the sympa=thy of the skin comes into play. It ceases to per=form its functions with ease; the tongue becomes furred, & perhaps if the irritation be very great, pre=sents a reddened edge and tip. A pain upon either shoulder, more commonly the right, points unerringly to the affection of the biliary organ. Though tis said, that even when the liver is

most involved, this symptom does not always exist: but when it is present, especially if accompanied by fullness in the right hypochon=
=drium and other criteria of a more equivocal character, it is certainly pathognomic. Then the heart and circulatory vessels begin to show that they too ~~begin to~~ feel the effect of the disease, evinced by palpitations or febrile action in the afternoon. That the cerebral centre and the whole nervous system are invol=
=ved is known by the head-ache, depression of spirits and a sense of impending evil. The strength at times appears to fail, not so much from real impairment of muscular power as from nervous debility; and the patient looses flesh and looks sallow. Even permanent structu=
=ral disease of the liver and heart may be prod=
=uced if the symptoms be neglected and suffered to continue a long time; and if the cause in the alimentary canal be overlooked will be certainly incurable and lead the patient to a premature grave. Irritability of temper is very often one of the first sympathetic affections;

and a good author has said, when the person knows no just cause why his temper should be unusually irritable, he should suspect some "derangement in the organs of digestion". In digestion properly so called is accompanied by a weak pulse. In this affection however the pulse is generally accelerated, and after meals frequent and somewhat tensed. Indeed in many cases I myself have observed febrile excitement in the afternoon when no food has been taken at dinner. — This I must confess is a very imperfect sketch of the symptoms and course of the disease. I do not conceive that it comes within the scope of this dissertation to describe the symptoms of all the sympathetic organic and functional lesions that may take place; for as almost every part of the body may in a measure be brought into sympathetic diseased action, suffice it to say that the symptoms are indescribably various. A few and the most important I have endeavoured to notice, those of the liver brain heart and skin. And the lungs too are often participators in the advanced periods of the disease constituting what is called Dyspep=

=tic Phthisis. —— Of the causes that excite morbid sensibility of the stomach and bowels, error in diet is the most frequent and universal. The habitual and excessive use of condiments and high living in individuals of sedentary habits, are certain to produce more or less of this disease. Exercise is most certainly a powerful promoter of digestion, because by exercise the secretions are increased, and the sys=tem needs more nourishment. It does not necessarily follow however, that digestion of sufficient aliment for all the wants of the economy cannot be accomplished with ease in those whose occupation confines them to sedentary mode of living. The difference is, that such persons require less nourishment, the waste of the system being less, and therefore should eat less if they would preserve health. When the the irritated condition of the nerves of the stomach has continued for a considerable length of time the gastric juice is impaired or not secreted in suf=ficient quantity, and the muscular power of the stomach is much decreased. This is real dyspepsia which I do not intend to touch upon, except merely as the consequence of morbid sensibility. Authors say

much stress upon fast eating and imperfect mastication as a cause of disease. By eating too fast the stomach is overloaded. Before the food that has been already swallowed has absorbed the gastric juice, or produced its influence of satiety upon the hungry stomach, more is hurried in, because the organ appears not to have had time to become sensible of the sufficiency that already occupies it; but continues to call for more until it is overloaded and painfully distended, having received more than it can readily manage. Nothing tends so much to harass the powers of digestion as this. Imperfectly masticated food too, because it is swallowed in a more solid state than nature has designed, being therefore of more difficult solubility in the gastric juice, causes much irritation by the abnormal effort that is required on the part of the stomach for its digestion. Mental emotions too of a disagreeable nature, as they depress the powers of the whole system, must produce a deleterious effect upon the function of digestion, whereby the food that is taken in remains too long in the organ in an undigested state, and becomes a source of irritation -

For such persons, a removal of their cases in the com=
=mencement, before structural lesion has been produced
by long continued functional disorder, is the best &
most certain cure. "The physician however cannot
" cure the moral cause that preys upon the mind and
" through that medium reacts upon the body. But he
" can in a great measure prevent the reaction of the
" body upon the mind, by which reaction the moral
" affliction is rendered infinitely more difficult to
" bear". — I humbly conceive, that in seeking the
causes of exalted intestinal sensibility and the dread=
=ful train of morbid symptoms produced by it, irri=
=tation in the Spinal Chord has been too much over=
=looked and neglected. — Spinal irritation may be
very great, and give no evidence of its presence,
except in disorder of the functions of other organs —
The patient and physician are both deceived by the
deceptious symptoms, and their attention diverted
from the real seat of the disease. Thus in a case which
came under my own observation, the patient, a young
woman, had apparently suffered from every variety
of intestinal disease and had been attended by
several physicians during the course of some years,

each of whom took a different view of the case, because the affection was constantly varying its forms of expression. At length they all, one by one, acknowledged that they did not know what was the matter with her. About this time, shortly after I had commenced the study of medicine, I had read Mr. Yates work on Hysteria, where he shows that many of the anomalous affections commonly called Hysteria for the want of a better name are caused by spinal irritation. Thinking that spinal irritation might likewise give rise to unusual symptoms in other organs as well as the uterine system and those that most particularly sympathize with it, I inquired of this young woman if she ever felt any pain in the back — she had not. But upon making successive pressure all down the spine, I discovered about the fifth or sixth dorsal vertebra very considerable tenderness — After a blister plaster had taken effect upon her back over the tender vertebra she was well. The affection returned however in a few weeks with intestinal pains, sick stomach, diminution of urine and violent pain in the head, and was

again relieved by a speedy blister; and the surface was prevented from healing & kept open by a smale and a call tartar emetic plaster. — In addition to this, Professor Potter in his lecture on Dyspepsia, relatea to us a case in which the patient was very much reducea, & haa suffered a long time from the most aggravated symptoms of Dyspepsia. After being confinea to his room the greater part of the winter, one fine morning in the beginning of spring he came down stairs: but in coming down he fell upon his back & was again confinea by an external bruise over the spine; after which the Dyspepsia seemea to leave him entirely of its own accoras — I would humbly suggest that this man's sickness might have been caused by spinal irritation, and that the contusion on the integuments actea as a revulsive or counterirritant and cured the disease — — — I do not believe I can lay too great stress upon improper diet as a cause of this affection, nor upon abstinence & particularity in diet and drink as a mode of cure. Every man who has felt anything of the disease in his own person has observea how much

better he has felt after an abstemious and light meal, than when he has indulged his appetite for food & his usual potations. The Hypochondriac, whose disease is but the Consequence, or rather I may say a symptom of exalted intestinal sensibility, and of the influence of the organs of digestion over the brain and the nervous system, experiences no gloomy forebodings after a day of abstinence and a light dinner with the "bottle unopened", & his only beverage that which nature has given us to slake thirst. - He no longer sees ruin impending over himself and his family, and death staring him in the face. - But let him return to his accustomed variety of dishes and stimulating condiments, with his usual bottle of wine, and all the fancies of his distempered imagination come upon him again with overwhelming force; & if he has suffered any real misfortune it is doubly magnified. - It will be sufficient I conceive to ~~describe~~ mention in as few words as possible the best dietetic and hygienic management of patients affected by this malady, without attempting to describe every morbid feeling and

and fancy that hangs those imprudent individ=
=uals who have brought disease and misery upon
themselves by indulgence in the pleasures of the
table - They are truly the victims of pleasure
and sensuality, not less than the miserable
ulcerated Syphilitic, who daily and hourly Cur=
=ses his own folly. - Speaking of the diet of such
patients, it may be proper to observe that in Dyspep=
=sia properly so called small quantities of light
and digestible animal food - such as game,
mutton and other tender meats, which should not
generally be taken from the young animal on
account of the gelatine contained in young meats,
rendering them less manageable by the stomach, -
Constitute the best diet - Whilst on the Con=
=trary, when there is morbid sensibility of the stom=
=ach and bowels, farinaceous, or other imitat=
=ing vegitable diet is invariably attended with
less inconvenience - Let the patient commence
with the blandest and most soothing articles of
nutriment - such as gruel - tapioca - sago
arrow root - And though he may imagine at
first that he is weakened by such low diet, let

him persevere ~~however~~ until by cautious trials he discovers that his organs of digestion have become able to bear small quantities of simple animal food, and by degrees a more generous diet. All kinds of fish, I believe, should generally be avoided. No drinks of a stimulating character should be used; which, when the morbid sensibility is seated in the intestines rather than in the stomach, though they may produce a temporary exhilaration of spirits and a feeling of pleasure, will eventually, and that too in a very few hours, cause sensations not less disagreeable and serious from being deferred. Perhaps however, in the advanced stages of this affection, when the system has been much weakened by long continued disease, a very very small quantity of some stimulating fluid may be taken at meals even when pursuing the most rigid regimen. This should be largely diluted. Such has been the advice of experienced men. The pursuance of such a plan may no doubt be beneficial by giving tone to the organ and rendering it less suscep-

=tibe of future irritating impressions, provided very great care be taken not to administer the drink too strong.— In this, the patient should not be governed by his taste nor his previous habits, but should yield implicit obedience to the direction of his physician. Entire abstinence however is perhaps the best general rule. According to good authority, a spoonful of good brandy diluted in a tumbler of water may be used at dinner; and even that quantity diminished should it produce any uneasiness.— The patient should carefully attend to the functions of the skin and keep up an equable temperature upon the surface, which is best done by wearing flannel, and avoiding sudden transitions from heat to cold. By a sudden check of perspiration the internal organs are not only affected by the mysterious sympathetic connection that exists between the skin and the internal surfaces; but the blood is driven internally upon organs, which in their irritated condition are unable to ~~bear the~~ resist its impetus and thereby become congested. The feet should be kept dry and warm.

Exercise, as much as the patient can bear without fatigue, should be insisted upon; and this too, must be carefully regulated and not be carried to excess. Walking is generally considered the most preferable mode of taking exercise; but in many instances, where the patient has not been accustomed to ~~exercise~~ walking, riding on horseback may be used with equal, if not greater advantage. And if the patient be too debilitated for either of these, the less rough means of gestation may be resorted to. Amusement too, or some agreeable occupation is absolutely necessary to present the mind, which is so often involved in this disease, from reacting upon the body. — Travelling, as affording at the same time exercise and occupation for the mind by the various scenes which present themselves, should not be neglected by those whose circumstances enable them to adopt it as a means of cure. The advantages of exercise and amusement arising from travelling more than compensate for the liability to changes of temperature to which the traveller is exposed. 'Tis considered important for patients suffering from morbid sensibility of the stomach and bowels to keep early

hours, and especially not to fatigue themselves by sitting late at night. They should retire early either upon no supper at all, or an hour or two after one of the very lightest kind and of small quantity. I do not believe that tea and coffee are so much to be avoided as some suppose. On the contrary, they possess an exhilarating effect that is salutary, with very little if any stimulant power manifested upon the heart & arteries, and well calculated in many instances to relieve depression of spirits.

It will be perceived that I have not entered much into particulars so far, with regard to the treatment. I think that the dietetic and hygienic principles I have endeavoured to lay down are sufficient for a dissertation of this kind. Upon these principles the practitioner can give parcular directions suitable to the cases on hand. These regulations are the basis of the treatment. Without them no cure can be accomplished, and by them alone nine cases out of ten in the commencement may be removed.

The medicinal treatment is comparatively of

little importance; yet much good may be done by the proper exhibition of medicines. In an irritated condition of the alimentary surfaces the secretions are morbid. The deranged state of the secretory functions will in a great measure be relieved by the change of diet; but at the same time it is necessary that the morbid contents of the bowels should not be retained; for, they act as irritants. For their evacuation mild aperients should be used. It is never advisable however to resort to drastic purgatives. They as more harm by the irritation they occasion, than good by evacuating the offending secretions. It has been observed by those suffering from this affection that all their troublesome sensations are increased by the operation of a strong cathartic. The mildest purgatives therefore are always the best: And in order that they may be efficient as well as gentle in their operation, we take advantage of the fact that the most drastic medicines combined in small proportions, making up the deficiency of quantity in each by the number of ingredients, act mildly and cause

but little irritation. It is well in making prescrip=
=tions of this kind to choose such articles as ex=
=ert their action upon different parts of the di=
=gestive tube, adding to them some mild mer=
=curial preparation to correct the secretion
of the liver; and also some a small propor=
=tion of some gentle carminative and anodyne
to quiet the nerves. – Aloes – Jalap – Colocynth –
Blue-pill, with a very minute quantity of Ipeca=
=cuanha, and an equally small portion of an
aromatic oil, (Ol. Cassia for instance) may
be united in such proportions as to produce
a mild laxative effect, to whatever extent the
physician may desire. – If the irritation be
very great and causes the patient such un=
=easiness as to prevent sleep and disturb his
rest at night, from 3 to 5 grains of Ext. Hyos=
=ciamus may be taken before going to bed, to=
=gether with the aperient medicine. The prep=
=arations of opium are to be avoided on account
of their constipating effects. When Diarrhoea
attends, which I have neglected to mention as
frequently occuring, Rhubarb is our most

valuable aperient. Frequently too, acidity prevails in the primæ viæ, and it then becomes necessary to administer antacids conjoined with our cath=
=artics. For this purpose, on account of its double effect, the Calcined Magnesia is an ex=
=cellent medicine; and combined with this and other cathartics mild carminatives to ob=
=viate flatulence are necessary. – The alvine excretions should be watched and observed both after medicines have been taken, and when they have not; for, we cannot always form a correct idea of the secretions from the rejections caused by our purgatives, on account of the known quality of many of them to impart their own colour, and some producing thin and others more solid evacuations. Revulsives and external irritants should not be passed over in silence. Their application forms a very important and valuable part of the treatment in many cases. Revulsives to the spine, when the disease has been caused by spinal irritation, I have already mentioned. – Coun=
=terirritants too, ~~to the~~ over the pit of the stom=

=ach are beneficial -- A plaster recommended by Dr Johnson, composed of a scruple of tartrate of Antimony to a drachm of Burgundy pitch, is said to produce in two or three days a copious crop of pustules "that will continue ~~for a wee~~ to discharge for a week afterwards and afford much relief." - Leeches over the Epigastrium may be serviceable - Of the numerous tonic and stomachic medicines so commonly resorted to in the treatment of morbid sensibility of the stomach and bowels I need say but little, except to condemn their use in the first stage, and to advise a cautious employment of them in the more advanced periods of the disease when symptoms of Dyspepsia vera (if I may be allowed the expression) supervene. I have endeavoured to give the general plan of treatment without entering into particulars, which would certainly be tedious and require that this paper should be drawn out to too great a length. Upon these general principles, which I hope I have lain down correctly, the physician may suit particular prescriptions to particular cases.

An
Inaugural Dissertation
on
Pertussis
Submitted
to the examiners of the
Faculty of Medicine and Surgery
of the
University of Bangalore
for the degree
Doctor of Medicine
by
Barry K. [illegible]
[illegible]

An
Inaugural Dissertation
on
Pericarditis
Submitted
To the examination of the
Provost, Regents, and Faculty of Physic
of the
University of Maryland,
For the Degree of
Doctor of Medicine
by
George W. A. Cole
of Baltimore
Maryland.
February 1842.

Anatomical characters of the pericardium

The pericardium is the membranous bag that surrounds the heart, but it does not adhere to it except at its base, it not only surrounds the heart, but also the roots of the large arteries and veins connected with it, it is covered on its sides by the pleura, and includes the aorta, and also invests the descending vena cava above where it joins with the right auricle. The pericardium is a double membrane, or consists of two layers, an internal and external one, it is formed like the pleura and mediastinum of the cellular substance, it is a dense and very strong membrane, there is also a very delicate thin serous layer attached to the internal membrane and secretes a transparent fluid which lubricates the surface of the heart and allows it to play freely within the pericardium.

In the acute variety of pericarditis the leading anatomical characters which are to be observed in such as die, are preternatural redness of the lining membrane effusion of serum and exudation of lymph; the redness is not very bright, most generally it is of a light brown tint; when the disease becomes chronic, or is so from the first the redness diminishes in intensity, the effused lymph often acquires the same color and the heart itself is usually of a bluish white appearance; neither in this or in the acute variety of the disease, does the serous membrane undergo much change sometimes there is a great amount of purulent matter thrown out in the chronic form and also a watery fluid of a limpid appearance but it gradually disappears by absorption, but when the fluid remains unabsorbed it gives rise to what is called hydro pericarditis.

On Pericarditis

Inflammation of the pericardium is no rare affection and the diagnosis in such cases is extremely difficult. Laennec observes, there are few diseases attended by more variable symptoms, or more difficult diagnosis; hence he assures us that if it is as frequently mistaken as recognised by Pericarditis is meant an inflammation of an acute, sub acute, or chronic nature of the serous membrane which lines the pericardium. This disease has been divided into two forms the acute and the chronic, the chronic form is said to be much more frequent than the acute; and is also much more extensively complicated; and is almost always united to all the organic affections of the heart. The symptoms which usually characterize the acute form of this disease are

Pain in the præcordial region, fever more or less intense with a dry skin; the countenance expressive of great anxiety irregular and feeble contractions of the heart, the pulse frequent, irregular, contracted and intermittent; syncope sometimes occurs, commonly there is cough but it is dry, respiration difficult, frequent and interrupted; the lower extremities sometimes becomes slightly œdematous in the latter stage of the disease, headache, considerable pain in the epigastric region, the patient is unable to lie down without experiencing great pain in his left side, he has to remain nearly in a sitting posture; acute pericarditis being almost always complicated with inflammation of some of the adjoining tissues or organs, hence we have no pathognomic sign, and consequently its

existence can only be presumed, from symptoms more or less founded in reality — Diagnosis — The diagnosis as I stated before is rather difficult this seems to depend upon the circumstance that it is almost always complicated with some other thoracic affection, or on the fact that its symptoms are sometimes scarcely to be observed. But we do not observe in every case of pericarditis, all the phenomena we have mentioned; when this is the case, the physician ought to redouble his ~~efforts~~ attention to enable him to form a diagnosis founded on the number of symptoms which remain, The disease which is most easily confounded with pericarditis is pleurisy. I am not aware of any sign which enables us to distinguish it from pleurisy but if in all cases we were to confound acute pericarditis with pleurisy, the

error would be of little consequence, as the treatment is nearly the same. As yet auscultation has not found any sign by which we can recognise acute pericarditis. There has been a new symptom, by means of which physicians have been enabled to ascertain the adhesion of the pericardium to the heart: it consists of a long continued undulatory movement to be discovered lower down than that ordinarily discovered in the region of the heart, this kind of motion has been explained as follows; During the simultaneous contraction of the ventricles the apex of the heart is carried upward in front, toward the fifth rib, and consequently draws upward the inferior portion of the pericardium with the diaphragm, and everything adhering to it: at the same time, a depression under the

left ribs of the superior region of the abdomen is obstructed. Immediately afterwards, the ventricles relaxing dilate to receive the blood, the apex of the heart moving suddenly downward; and not having free space to move in, communicates to the adhering pericardium, the diaphragm, and other parts, the shock, which becomes sensible, exteriorly, by a slight elevation, discovered in the situation where but a moment before the depression had formed, but which however extends a little lower down, the depression precedes the shock; since the contraction of the auricles is the commencement of the action of the heart, if this be true then there does exist a sign, which enables us to recognise with great facility adhesions of the pericardium; even when they are complicated with other diseases

of the heart or chest.

Prognosis: Pericarditis is a disease of extreme severity, taking into view the importance of the functions of the adjoining organ but it is not regarded as mortal, it may yield to blood letting but the greatest cause that we have to fear is adhesion taking place, the regular motions of the diaphragm are disturbed and consequently the motions of the heart are also disturbed, but there are instances on record where complete adhesions of the pericardium were found, in which persons the circulation and respiration had not sustained the least embarrassment, when these and other circumstances are taking into view we cannot but regard this disease as always one of very serious import

Causes. — The causes of pericarditis may be such as are capable of exciting inflammation in any of the similar tissues, as cold, the sudden healing up of old ulcers, the influence of depressing mental emotions, repelled cutaneous affections, blows and falls on the precordial region, immoderate exercise suppression of transpiration, such as usually takes place on exposure to the air while in a state of perspiration, imprudent use of cold drinks in similar circumstances, the suppression of accustomed evacuations, rheumatic affections. These causes will be so much the more efficient, in proportion as they act on individuals of a robust, sanguine and at the same time irritable temperament.

Treatment of Pericarditis.

The treatment consists in the employment of antiphlogistics means, first general and local blood letting we can seldom fix on the quantity of blood necessary to be taken, this will depend on the age, strength and sex of the subject, the application of from twenty to forty leeches is highly advantageous, great benefit may also be derived from cupping; after the inflammation has been somewhat subdued resource may be had to epispastics. Dr Eberle recommends blistering on the back between the shoulders and is considered a very powerful auxiliary after the abstraction of a due quantity of blood, calomel and opium given in free and frequent doses is considered a valuable remedy. Dr Latham speaks in the most favourable terms of the employment of mercury in pericarditis particular

in the rheumatic form, and given in such doses so as to excite moderate salivation, antimony is also employed in small doses, the patient should be put upon the most rigorous diet, diluent drinks used, when the disease assumes the chronic form we should recur to the use of blisters setons &c we should neglect none of those means which are used in other inflammatory affections.

An Inaugural Dissertation on Ulcers.

Submitted to the examination of the Provost, Regents & Faculty of Physic of the

University of Maryland.

For the degree of Doctor of Medicine,

By

C. Berkly Buckner

of

Lynchburg Virginia.

February 1842.

Ulcers

"Ulcers have been variously defined by different Authors. According to Sir Astley Cooper they have been defined to be "granulating sores secreting pus". And according to Liston they have been defined to be "Breaches of continuity in the soft parts of the body, with secretion of purulent or other fluid". And according to Gibson. They are "the result of some injury done to a sound part, by a wound, contusion abscess or burn", And by Dr Smith they are defined to be "solutions of continuity". He then divides them into four classes.

1st. "The simple Ulcer. It is generally covered with granulations, healthy pus is secreted, the edges have a whitish or bluish white appearance, which shows that cicatrization is going on, the granulations do not rise above the borders

of the sore, the constitution suffers but little. the appetite is generally good. A patient labouring under this form of Ulcer can hardly be considered as diseased; but it often happens that this form of Ulcer runs into the 2nd form or Irritable Ulcer. They now become very painful, bleeding upon the slightest touch, frequently an Erysipellatous Inflamation is set up which extends itself around the parts. The whole system appears out of order, Patient frequently has a chill, followed by a sympathetic fever, he complains of a headache, and a general bad feeling. After a time, the nature of the sore changes from an Irritable to an Indolent Ulcer, then back again, and so on until it at last takes on the nature of the 3rd class,

the Indolent, the lymph then is thrown out. sometimes it becomes very offensive, the patient experiences little or no pain, walks about as usual. We frequently see mendicants exhibiting this kind of Ulcer in order to excite the sympathy, The ulcer has a rough dark coloured appearance on its surface, the discharge from them is frequently very offensive, they appear to be much deeper situated than they really are, owing to the cellular tissue and integuments being a good deal thickened—

The 4th and last class are the Varicose Ulcers. They are produced by varicose veins. They may be simple, irritable, or indolent, They are the worst sort of Ulcers to manage. They are generally brought on in those

who are predisposed, and then the Varicose Ulcer frequently occurs from the most simple sore. We generally find these Ulcers as well as the other forms of Ulcers on the lower extremities. The blood having a tendency to the lower extremities on account of their depending position, becomes engorged with blood, the superficial veins are the only ones in which this occurs. The deep seated veins are assisted by the muscles in propelling the blood, frequently the vein burst. Dr Smith mentions several cases, in which the patients have lost their lives simply from not elevating their limb. They first originate in the small capillary vessels. We then find the Vena Saphena Major enlarged, livid, hard and

elongated. The blood does not cir-
-culate freely, and the Ulcer is
not plentifully supplied with
blood. The coats of the veins are
said to be highly inflamed.
. The Treatment of Ulcers. 1st of
the simple. If the granulations go
on and are not too exuberant, we
use very simple applications.
. We generally apply a rag with
some simple cerate, the rag
having some holes stuck in it, in
order that the pus may escape,
and then a pledget of lint may be
placed next to the rag, so that it
may absorb the pus. A bandage
must then be applied. It should
be applied smoothly, in order that
there may be equal pressure
on all parts. The bandage should

be removed every day, and new dressing applied. - When the Ulcer begins to put on the Irritable appearance, warm and soothing applications should be made use of. The bread and milk cataplasm, with a little Pulverized Opium sprinkled on it, is the application which Dr Smith generally recommends in the Baltimore Infirmary. Warm water has been strongly recommended; the parts being afterwards covered with Oil Cloth. This application has been made use of but in one case, since I have been in the Infirmary; and then it seemed to have afforded good deal of relief to the Patient. The Patient should keep the horrizontal position, and move the limb about in bed, and keep it extend-

-ed, as it often happens that Anchy-
-losis takes place from keeping it
in one position. If the patient is of a
full habit, blood should be drawn
from the arm; the Stomach and Bow
-els are to be freely evacuated.
Sometimes cold water appears to be
beneficial, The remedies should be
continued as long as they appear
to be beneficial, and when they
cease to be so, they should be changed.
Anodynes should be administered
at night, Anodyne applications
are frequently made use, as the Hop
Cataplasm, Opium poultices, and
the different vegetables, narcotic
Oleaginous preparations are rarely
ever prescribed, as they generally
appear to be injurious. The Patient
should be careful to keep the

horizontal position. The roller must be applied smoothly, and with some tightness. When it begins to change a little, and take on the character of an Indolent Ulcer, the Adhesive strips should be tried, as they are said to prove useful in such cases. Some writers recommend stimulating applications, such as the Nitrate of Silver, in solution, or the stick. The solutions of the Sulphate of Copper. The Sulph: of Zinc, and the Bi Chloride of Mercury, frequently the Caustic Potassa is employed. These stimulating applications should never be employed, untill the Ulcer takes on the character of the Indolent, as they are only used to keep up the excitement. Some recommend the use of the Knife, but it appears to me, that the

Caustic Potassa would answer equally as well, and certainly with less pain to the patient. In the chronic form whilst these stimulating applications are being made use of, the bandage should be employed. It prevents the engorgement of blood from taking place. The general health of the patient must be attended to, He can now take ~~general~~ a little exercise. The patient's diet should be simple, but nutritious, bowels should be kept constantly open. The solution of Iodine has been tried of late, and appears to be quite a fashionable remedy.-

Formerly the treatment of varicose veins was by the application of the ligature. but this was found to produce phlebitis. in most of the cases.

Some of the operators thought that this was produced by the pressure of the ligature on the vein. It was then suggested, to cut out a portion of the vein. but in many cases that also proved fatal, Then the subcutaneous operation was advocated. Since the operation was dangerous. Another remedy which has been recommended, and tried with great reputed success, by some surgeons, was the sub cutaneous ligature. But Dr Smith says that this, and no other operation, should be performed for a disease in which is not fatal. He relates a case in his lectures, where he once performed this operation on a patient in the Baltimore Infirmary, of Scipion, under, as he considered, very favourable

circumstances. but he says that in a short time symptoms of Inflamation of the veins came on, connected also with Typhoid symptoms, and the patient died. thus the ordinary bandage appears to be the safest. the patient can wear the lacea stocking if he dislikes the trouble of the roller.

I have in this my dissertation adopted Professor Smith's definition and classification of Ulcers and tried as far as I could to carry out his treatment I have divided them into the four class as laid down by him.
First The Simple Ulcer, as it occurs.
Secondly The Irritable Ulcer.
Thirdly The Indolent Ulcer—

And fourthly. The Cancrine Ulcer.
I doubt not, but that I have left out many remarks both in the description of the Ulcer, and their treatment, which would have occurred to the Surgeon while examing the sore. Since my residence in the Baltimore Infirmary I have had many opportunities of seeing this form of disease, and I have observed that Ulcers generally appear on Individuals of a depraved Constitution, and in all of those cases it was necessary to attend strictly to the Constitution, and so soon as the General health begins to improve that the Ulcers, assisted by local applications, would commence to heal.—

An

Inaugural Dissertation

On

Lues Venerea

Submitted

to the examination

of

The Provost, Regents, and Faculty of Physic

of

The University of Maryland

for

the degree of Doctor of Medicine

by

J. Contee Worthington

Baltimore Md

January 1842

Lues Venerea

As ~~it~~ respects the Origin of Syphilis I shall say nothing for it is a matter of speculation It has occured ever since there has been Men and Woman and will continue as long as they inhabit the Earth. To begin the Matter Gonorrhea and that of Chancre are specifically different from each other for instance we cannot cause Gonorrhea with the Matter of Chancre and vice versa, and also Mercury has no influence in destroying Gonorrhea or its consequences nor can any of the consequences of the venereal poison be produced by it. The Lues will seldom or never be cured except by Mercury either primarily or secondarily for before this remedy was known death was the general looked for, result. It is asserted by some that you might infect the Matter of Chancre with Mercury into the system with impunity for Mercury completely decomposes the venereal virus, but if you take the Matter of Gonorrhea and mix it with Mercury and infect it into the Urethra Gonorrhea will

be caused if you take Matter of Chancre and put in the urethra Chancre will be the result although denied by some I am inclined to think the Matter of Chancre is not liquified like that of Gonorrhea but is taken up by the absorbents and conveyed into the system The Matter of Gonorrhea is not absorbed or if it should be it produces no effect The Sympathetic Bubo in Gonorrhea is produced by irritation. It is erroneous to suppose (as some do) that Gonorrheal Opthalmia is produced by absorption for it is either caused by the application of the fingers to the affected parts or by sympathy. The Matter of Chancre is or may be absorbed and give rise to Bubo without producing the former. Persons having Chancre after a time have Nodes, Ulcers sore throat &c which is accounted for by the absorption of the Matter without a local affection. There is also another insidious way by which it insinuates itself into the system that is by the Matter coming in contact with an abrasion or where the cuticle is thin

hence Surgeons and others may have it by
merely having touched the fingers in the Matt
er, sometimes it is so acrid that an abrasion
is not necessary respecting local applications
to venerial sores I have but little confide
nce to place in them but admit there are
few instances when the Chancre is just
forming which may be overthrown by
stimulants but the consequences are too
dangerous and in my opinion is bad
practice (Dr Patter) it is an Ignis Fatuus which
will lead a Man into a perplexcity from
which only the sampson of Medicine can
extricate him. I will now begin with
Chancre from which all the other forms of
disease seem to arise except in a few ins
tances. The word Chancre is derived from
a French word which signifies to eat
down. The symptoms are at first an increas
ed redness, itching with some pain the irri
tating cause soon produces a secretion under
the cuticle and then breaks, the edges bec
ome hard and continue so, such edges alm

ost always accompany chancre. It is sometimes of importance to ascertain what time is required to produce chancre for the matter being more acrimonious in some cases than in others, the time varies in different persons, in some it makes its appearence in twenty four hours after the communication in some it has been produced in twelve hours Dr Patten in others six or seven weeks elapse before it is discovered. about seventy two hours is the mediam time, when the patient feels a tittetlation about the glans of penis which is communicated to the bladder, an increased desire to void urine takes place sores occur on any and every part of the body but more frequently on the glans of penis and fraenum sometimes they will not heal until the glans or fraenum is lost sometimes hoemorrhage takes place from the sloughing of the parts which may be arrested by pressure when it can be applied immedeately to the part, when it is not convenient to use pressure, resort to Sulph:

Alumen, Nit: Argenti, Creosote, Al: Secale, Co
nuetem and if necessary tie the vessel. Some
persons have one Chancre only, others again
have the prepuce covered. they often run
into each other. Dr Potter says a Chancre is
(prevented from spreading) by washing it
in warm Milk and water and then covering
it with Calomel, the Matter of Chancre is of
a dirty hue and sometimes green - the size
of Chancre varies, its appearance says Dr
Potter I have noticed several times, it is
a large excavation filled with a dark sa
nies which was cleansed by washing and
filling it with Calomel. The Diagnosis of
Chancre is necessary for one should be able
to judge between them and other cutane
ous affections for we may produce injurious
effects in those not venereal, there are Many
other ulcers which take place on the organs
of generation but there is a difference when
they are not venerial, that is they are situ
ated two or three inches above the prepuce
they also appear hard and stationary for

some time, and then disappear of themselves and have been called but I believe erroneously Pseudo Syphilis, in my opinion they would soon disappear under the application of slight astringents. Dr Potter has cured them by a solution of Corrosive sublimate in two or three days. the parts of generation are subject sometimes to various herpetic affections a kind of tænia the scab rubbing off and coming on again excoriation from heat, but this requires no other treatment than cleanliness the acrimony of the discharge sometimes produces a disagreeable ulcer- and has been cured by a decoction of Oak Bark. Sulphur Ointment. also by a solution of Corrosive sublimate, we remain doubtful a few days but we soon become acquainted with the nature of the disease for every day the sores become worse, Chancre has its edges somewhat elevated sometimes hard, but there are exceptions to this general rule. I myself have seen the reverse of this. if it be a true

Chancre a little stimulus will produce Bubos we may be sure they are venereal if Cleanliness does not improve and heal them. there is another kind of Chancre an ulcer of a livid appearance for the Matter is acrimonious and some say they never terminate in gangrene still they are sometimes of an exceedingly unhealthy appearance, they heal readily when treated properly if they do not it is the fault of the Physician or the patient himself. the best Constitutional treatment in my opinion is the Proto Iodure of Mercury one grain combined with Pulv Opii half grain night and Morning. I condemn every stimulating applications. the only local applications necessary is lint saturated in Liquor Plumbi Subacetatis or a linnen cloth spread with simple Cerate or Ungt Spermaceti to prevent the dress of the patient from irritating the sores. I dont think any of the escarotics are useful in this stage. Nitr Argenti I am aware is frequently employed and I think very incorrectly although it may and no doubt does some service applied after the Mercury

has affected the salivary glands and the sores appear sluggish and not disposed to heal. The phagedenic Chancre deeply corrodes the organs of generation and is considered by some as not being Pseudo Syphilis and the treatment to be employed should be Hydriodate of Potassa and Ext: Cicutae five grains each three times a day to be gradually increased to fifteen. Oak Bark and weak solution of Corosive Sublimate has been recommended by some practitioners but the efficacy of such remedies is I am disposed to think of little importance. The excision of Chancre has long been known to the profession as one of the safeguards to this ravashing disease but it is now looked upon as bad and unpopular practice and can only succeed when the poison has not yet entered or distributed itself throughout the general system, and even then it would be improper to rely upon it altogather the consequences of such practice are hamorrhages of the most alarming character in such cases it would be proper to resort to some escarotic that which is frequently employed is

Nit: Argenti and even this is a dangerous practice because of its disposition to stimulate the lymphatics and thus set up an additional inflamatory action in the affected parts. When we employ Mercury a general question is what preparations are the best. In my opinion it depends allogather on the constitution of the patient, those of a scrofulous diathesis the Proto Iod: Hyd: is the best in others the Mass Hyd and others the Prot: Chlor: Hyd: in small doses but I am disposed to use the Prot Iod: Hyd: combined with opium in all cases, for I have had more experience with it and I think it will appear evident to every one that the Iodine operating so particularly upon the absorbent and glandular system it cannot do otherwise than assist in a great degree the Mercury which has a like tendancy to eradicate the disease. The Ungt Hyd is Dr Pollers favorite preparation and I doubt not its being an excellent remedy for I have the highest regard for that gentlemans opinion. I will now proceed to the subject of Bubos produced by the absorption of Matter

of it. Perhaps never was this so clearly seen from which he argued of the skin function is determined by physiological and that such an accidental influence acting on the affected part. When we explain Pheasey's proposed reaction is that inflammation on the basis of his physiologic deformation and the distribution of the circulation of the blood. Hyde: in the heart in which the first stage was attended the first stage. Hyde: we must have [illegible] but from observed it was the first also. Hyde: continued until diseases in all cases for a time [illegible] inflammation until it was a thing it will differ particularly it every day that the [illegible] differentiating to particularly when the [illegible] plan during by which it cannot be attributed this defect in a point depends the pheasey which has a like [illegible] is accidental the disease. The simple Hyde is of Italian family physicians were of death part is being an accident commonly for I have the disease reason for that pathogenesis differing. I will now proceed to the [illegible] of Hunter proceeded for the observations of Italian

carried into the glands some believe it is carried into the circulation but it seems to me more than probable that it undergoes a change in the lymphatics before it enters the circulation it is universally admitted that the poison is carried into the glands by the absorbents and the glands being made of a combination of these vessels there is a removal or stop put to it. Bubos may and often does arise without any external appearance they may also appear in various parts of the body but the inguinal glands are the most common seat the passage of the matter is so evident through the lymphatic system that if you examine them you will find that they are enlarged and as sensible as the bubos besides this the lymphatics may suppurate and cause ulcers without a bubo being in the gland above. Bubos will take place during the early part of chancre but subsequently if irritation, free living and exercise on horseback be taken hence the necessity of rest and temperate living I am inclined to think the higher

the inflamation between the Chancre and gland the less liability of producing bubos. A gentle stimulus promotes absorption and a great one retards this process. When a bubo becomes ulcerated or opened and a discharge comes on if it be not corrected by Mercury constitutional symptoms will be the result, and hence this first sore should be treated as soon as possible. The opinion that the Matter secreted after bubo being simple pus I think is incorrect for Dr Doller says he has inoculated with it and produced Chancre Mr Hunter has undoubtedly produced a great deal of Mischief by teaching this doctrine. A bubo generally suppurates in eight or ten days sometimes in three or four except when the patient is scrofulous, then it may remain swelled and not suppurate for a long time, the pain is less acute the tumour more indolent; the bubo larger pain in the back and hectic fever distinguishes lumbar abcess from bubos, the bubos in appearance is various, they

may assume the yellow and red color in various directions but this makes no difference in the treatment. bubo has been mistaken for Inguinal Hernia, the difference is easily discovered there is no discoloration of the skin, the feeling is different the pain and sickness in the stomach is enough to distinguish the two diseases. Injuries in the lymphatics producing a swelling in the glands but this can easily be traced when bubo of a venereal kind suppurates the skin falls off and is one argument in favor of their being opened, in woman they are different they are near the pudendum they are nearly as large as those in men sometimes smaller the treatment is a matter of great importance. Friction and the internal use of Mercury is necessary and especially after being opened, the dressing should be mild in the first instance, instead of being left to open spontaneously when we find they fluctuate, open them freely for when they break they are serious, we should not

open them before suppuration has taken place for when we open them the cavity is small they will never heal whilst they are venereal but when not so they heal like other Ulcers, they may be discussed by frictions and applications of cold water ice &c they disappear under this treatment. Dr Potter has reduced them one half by the application of cold it lessens pain and procures sleep. there is a great difficulty to cause old bubos of a venereal character to cicatrize for on account of debility they will not heal without the use of tonics &c in the first stage after Mercury is local bleeding the difficulty is the virus being destroyed and a Mercurial Ulcer spreading becoming wider on its surface bleeding and on removing the dressing its color is changed like a comelion. the patient is irritable and the first thing to be done is to omit the Mercury and give small doses of Opium rest, diet and when scrofulous cicuta keeping the Ulcer clean. bark and good diet. the

appearance of the Ulcer soon changes and it heals after a long time.

Venereal Sore Throat: there is no part more frequently attacked secondarily than the throat sometimes it will be affected in ten days from the appearance of the chancre in others at various periods it is more apt to accur when the poison has not been arrested by the inguinal glands when it proceeds from bubo it is on account of the matter being absorbed if not chancre being carried through the system he feels at first a soreness and tenderness in the throat and a fullness is sometimes over the whole internal surface but most frequently on one side it is generally attributed to cold but nevertheless it increases and suspicion is caused sores frequently take place on the Uvula or Amygdala and small and ragged ulcers they are not deeper than the skin and may not spread for several weeks in some persons they affect all the parts at once in some they destroy the parts they spread along

the tonsils and one is destroyed before the other is affected there is no pain except from swallowing an erisipelatous redness (Mr Well has suggested that without the interposition of Mercury ulcers would form, a deep copper color is characteristic of their affect a sense of heat extends over the whole fauces. Patients relating their case generally tell their own story. the secretion is suspended by the operation of Opium in this state deafness sometimes takes place the Membrane is thickened extending to the whole Eustachian tube, but only a thickening of the Membrane takes place and when Mercury is given as a remedy the patient will soon be relieved. On examination we find a white colour (a venerial ulcer in the throat is never white as ulcers increase the bones are brought into concern also the palate and in some few instances the first vertebra, there is no difficulty in treating these affections, the only difficulty is the judicious use of Mercury. Patients should be put in a Mercurial atmosphere. a dis

tinction is very easy there are two des
criptions of ulcers which may be mistaken
for venereal ulcers in the throat first those
which succeed to long continued catarrh
and sore throat, and those from a long
continued use of mercury particularly upon
taking cold those from inflamation are of
a florid red colour and those from merc
ury are either of a pale or deep red from
below. venereal ulcers form on the surface
and never give rise to abcess, it never becomes
clean except made so by mercury and
it never painful except from irritation.
in common inflamitory affections of the
throat they never assume an erisipelitous
appearence if the do they must be erisip
elitous and are distinguished by the well
known circumstances of their secreting a
thick viscid fluid which causes hawking
it also belongs to cynanche. in scrophul
ous habits they are easily distinguished
from those of mercury there is a fulness
and swelling over the amygdala of both

sides or the whole fauces and when from Mercury there is generally a tumour these are unconnected with venereal and are less prone to ulceration the sores in venereal are limited whilst in others they are extended over the whole part. the inequalities of the Amygdalæ are often mistaken for ulcers. the next are the ulcers of the nose and mouth. In some cases the mouth is sooner affected than almost any of the preceding situations innumerated, sometimes we find ulcers in the cheek the most common course is from the throat to the nose they are very difficult of cure frequently the skin is affected and all may occur at the same time in some few instances the most external parts of the nose are affected most generally upon the inside on the membrane the patient commonly complains of some obstruction in one of the nostrils, the colour of the ulcer in the nose is almost always white whilst in the mouth they are seldom or never white (vide B. Bell sometimes the

Membrane is only thickened, sometimes this white appearence may continue for months in some cases Matter is seldom formed in those ulcers the odour is easily known in this state of things, the bone becomes affected and exfoliations are the result, an involuntary flow of tears not unfrequently takes place the sense of smell is often impaired or destroyed and if disease is not arrested the septum nares become affected and falls in giving rise to that flat nose which we often see in persons who have been labouring under this formidable disease, when the Cartilaginous parts are affected the cure is extremely difficult it is cured by Mercury in those cases ulcers often assume a cancerous character and have been extirpated and of course recovered Mercury is the only remedy and must be continued long and when opium is used supposing them cancerous they generally die the Mercury must be continued until they all exfoliate but they will never

heal as long as the habit is venereal
I should have remarked that ulcers
in the mouth and Mercurial sores may
be mistaken for venereal sores, the app
earance is the great criterion, the Mer
curial ulcer differs from the venereal
in appearance, the latter being of
a dirty colour, sometimes of a yellowish
hue while the others are white, Mr Bell
compares them to the mouths being smear
ed with Milk which is in My opinion
an excellent comparison. thus have
I ended My Thesis and shall conclude
with the words of the illustrious Potter
"As gentlemen I have thought its proper
to be so particular in this disease and al
though I do not pretend to be superior to any one yet
if I know anything of any disease it is this one
and if you follow the doctrines I have laid down
you need not turn your back to Hunter, Swieder
or even Cooper himself"

An
Inaugural Dissertation
On
The various methods of examination used in medicine
Submitted to the examination of the
Provost, Regents, and Medical Faculty
Of the
University of Maryland
for the
Degree of Doctor of Medicine
by
William, M, Hammond
of Baltimore County and State of Maryland
March
1842

On the various methods of examination used in Medicine

Medicine, which may be termed a science of facts, is indebted for its present distinction to observation, and on it must depend for its further advancement. To observation the physician owes the most exact and valuable parts of his knowledge; and upon it he rests the basis of his diagnosis, prognosis, and treatment of disease. As then observation is, at once, the surest pledge of the future improvement of the healing art, and the safest guide to those who practise it, we must see at once the necessity of applying diligently to its cultivation.

It is at the bed-side of the patient that the observer must study disease; there he will see it in its true characters, stripped of those false shades by which it is so frequently disguised in books. There, freed from the vagueness and illusions of systems, the student can acquire fixed and

defined notions of diseases, and learn the difficult art of distinguishing them. If physicians had always confined themselves within the limits of strict observation, — if they had restricted themselves to such conclusions as are fairly deducible from facts, the science of medicine would not now be overloaded as it is by hypotheses, and we should possess a sufficient body of materials to enable us to establish sound general principles.

Though clinical studies are necessarily long and laborious, still they should not discourage the young observer, they will amply requite him for his pains. Let it not however be supposed that observation is to be confined to the mere acquisition of facts, it will be of comparatively little value unless directed by reflection. To observe Nature is not enough she must

be interrogated if we wish to wrest her secrets from her, and acquire at the same time the means of communicating to others the result of our researches.
The improved means of investigating diseases, which have been devised of late years by rendering the methods of examination more strict and rigorous, have given a very decided impulse to medicine. Pathological Anatomy, has raised it to a level with the descriptive sciences, when considered in reference to organic alterations, and the "Auscultation Medical" has placed it amongst the physical sciences so far as the doctrine of symptoms is concerned. Every well informed person now admits that the discovery of Laennec, has effected for medicine, what Petit, and Desault, have already done for surgery. For if a catheter introduced into the bladder

gives an assurance of the existence of a foreign body in that viscus, pectoriloquy is a no less decisive test, of the presence of a preternatural excavation, in that part of the lung in which it is perceived. Notwithstanding the advances that have been made in the investigation of diseases particularly those of the brain, and its investments, and those of the chest, and digestive organs — notwithstanding the improvements that have followed the researches of Laennec, Broussais, &c we cannot deny that many points remain immersed in obscurity and that several questions of primary importance continue undecided. As however it is by observation alone that these and other difficulties, can be removed it cannot fail to be instructive to inquire what are the qualifications necessary

to be possessed by those who engage in the difficult undertaking of correcting erroneous impressions, concerning the doctrine of diseases, and removing the obscurities that beset them.

Whoever wishes to extend the boundaries of Medicine, should commence his education by acquiring a perfect knowledge of the Greek, and Latin languages, and should then proceed to learn the modern languages, particularly the French, Italian, and German, This is necessary to enable him to study with effect the many excellent works published by our neighbours, and (Should he visit those countries) to observe with advantage their clinical practice, and form an accurate estimate of their modes, and principles of treatment,

The observer should acquire correct ideas of several sciences, which may be deemed necessary

to medicine. He should be acquainted with Chemistry, Natural History, and Natural Philosophy, as he will constantly have occasion to make application of their principles, and if he be ignorant of them, many physiological, and pathological, phenomena will appear altogether unintelligible. The sciences more strictly medical, and therefore indispensable are General Pathology, Physiology, and Anatomy, particularly the anatomy of the tissues, and viscera in their healthy state, which has hitherto been too much neglected and which has begun to be properly regarded only since pathology, has been more carefully studied. How can any person know a particular tissue to be diseased if he be ignorant of its characters in its healthy state, How can he distinguish the effects of disease from those changes which occur

after death has taken place, if he does not possess correct notions of each and of the anatomical characters, which are peculiar to them. Until Anatomy is studied in this way disputes, and controversies, will go on as they have hitherto done and medicine will make no real progress toward improvement. These remarks apply with at least equal force to pathological anatomy, without a knowledge of which it is quite impossible to give precise and detailed statements of the various alterations of which the tissues and organs are susceptible, or avoid confounding the different structural lesions which occur in them.
These however are not the only requisites which an observer should possess.
He should be acquainted with Materia Medica, Surgery, Hygiene, and above

all Pathology, without which he can establish no claim to the character he assumes and still it is by observation only that he can become a Pathologist. In order to draw up correct histories of cases it is not sufficient merely to observe the phenomena which they present during their progress, they must be observed accurately and he who expects to do this must possess many requisites both of tact, and discrimination, which can be acquired only by a long and regular attendance on clinical practice.
A statement of a case should not consist of a mere detail of such symptoms as accident has caused to be perceived, nor of a confused unconnected enumeration of them. It requires no small degree of sagacity to group them together according to the relations which subsist between them,

so as to refer them to a common centre, or to a derangement of some particular function, or organ, and thence ascend to a knowledge of the seat and nature of the affection of which they are characteristic. It is quite impossible for an inexperienced person to appreciate the many shades of difference which diseases assume. How can his unpractised eye distinguish a mere accidental phenomenon, from a leading symptom, a remote sympathy from a direct effect, or an insignificant circumstance from that which should constitute, the very basis of his indication of cure, if he cannot assign their respective values to all these circumstances, how can he derive any advantage from the facts which he collects, or how can his reports be ever considered as exact descriptions of the diseases he has seen

A statement of a case can never be useful to him who makes it, or profitable to Science, unless it be a faithful transcript of the phenomena that have occurred. For if it be not correct in all its parts it will but mislead the judgement, and confirm errors whilst exact facts on the contrary strengthen the judgement, and contribute to the establishment of an exact science, When such results as these follow from the mere fact of the observer's knowledge being inadequate what must be the consequences if it be but a mass of falsity, and error. Instead of transcribing a faithful history of the diseases presented to him he will give an incorrect, and inadequate account of them, and the only result of his observations will be to lead to false theories, which may be considered as so many pathological

romances, that have long retarded and still retard the progress of medicine. Even under the most favourable circumstances such a person can only attain an imperfect mode of examination; the degree of its imperfection will of course be lessened in proportion as he acquires a better knowledge of Pathology, or has opportunities of observing and reflecting, on the facts collected by others, hence we can generally form an estimate on reading a case of the degree of knowledge possessed by the person who has detailed it. But these are not the only sources of error to be guarded against.
It will be found necessary to review such reports and observations as had been made during the earlier years of study which are generally incorrect or incomplete. This is not done for the purpose of supplying their deficiences or correcting their errors

but in order to guard against any erroneous impressions they may have left on the mind impressions which in too many instances have exerted an injurious influence on the whole course of men's professional career.
Correctness, and discrimination, are qualities indispensably necessary for a physician, and these he can only acquire by constant exercise, and observation which will so sharpen his senses, and faculties, that he will seldom fail to seize and appreciate symptoms and phenomena which escape the notice of others.
But it is not sufficient that the senses should be thus exercised as we know that there are many minute circumstances that will escape them hence the necessity of assisting them by certain auxiliaries, Thus it is that certain alterations of

structure which are not perceptible by the naked eye, are rendered manifest by a lens, or a microscope, and a virus which cannot be detected by our senses or even by chemical tests, becomes evident by inoculation. Each of our senses being adapted for special purposes all of them are made to render important service to medical inquiries and ought to be employed concurrently in conducting them.
Percussion, and still more auscultation, have clearly shewn the great value of one sense that hitherto was seldom directed to this sort of investigation in a word by the eye we can distinguish small pox, from Cow pock, by the ear ascites from tympanites by the smell gangrene of the lung, from phthisis, by the taste, diabetes mellitus, from simple pththisuria, by the touch aneurism from various other tumours,

The observer should possess penetration not subtlety, sagacity to follow the thread of a narration too often obscure discernment to overcome the obstacles which false modesty or want of candour may throw in his way, a sober judgment to form just ideas of the impressions conveyed by his senses correct reasoning powers that he may deduce no conclusions, but such as fairly follow from the premises, perseverance that he may not be discouraged by the difficulties that stand in his way, and lastly resolution, and humanity, to disregard the danger of contagion, as he does the disgust and risk of the dissecting room.
The observer should not allow any circumstance of a case however trivial to escape him He should be free from prejudice, and prepossession, if he wishes to avoid giving

giving to his observations an erroneous direction and impressing on his statements the bias he has contracted. He should see things as they really are, not as he may wish them to be. He should always recollect that the slightest error or negligence may be injurious, not only to himself but also to those, who repose confidence in his statements. The duty of an observer is that of an historian from that he should not depart his chief merit is correctness, and fidelity.

But if experienced persons have to contend against difficulties such as are here mentioned, we can readily see what care and exertion are required on the part of those who are just entering on their clinical pursuits. Hence the necessity of their recieving a regular course of instruction which while it

fully impresses their minds with the importance of the pursuit in which they are engaged may point out to their notice the various phenomena that present themselves, and indicate their relative value and connexion. A system of clinical instructions so conducted should be considered as indispensable in every hospital which is resorted to by students.
"Life is short and Art is long" says the father of Physic. No man can see every thing by himself but reading will make him acquainted with the observations of his predecessors and contemporaries, and enable him to profit by their experience. in fact it becomes an imperative duty to read and study as a most efficient means of acquiring new and useful information.

but if this be not a sufficient incentive then it should be recollected that if we do not read we run the risk of being left behind by others and that our knowledge is recieving no addition while theirs is progressively advancing. The observer should be scrupulously exact in his descriptions and statement. He should above all things be impressed with that integrity and love of truth which are indispensable to a physician. The mere gratification of self love should give way to considerations of higher consequence and which concern so nearly the interests of humanity.
One of the most efficient means of acquiring these different attainments and becoming skillful practitioner is when we see a particular case to consult the writings of those who have treated expressly upon the disease to which it

is referred. The work will then be studied with advantage, when we have an example before us with which we can compare its descriptions. In this way precept and practice are made to go hand in hand, tact, and discretion, are acquired and the experience of those who have already distinguished themselves is made to supply our deficiencies in this particular. We should not follow this course however as servile imitators. We must exert our own discretion for though we find much to approve we shall meet with something to condemn. While we adopt the one we appropriate to ourselves part at least of the spirit of our masters; when we reject the other we feel reason to distrust ourselves, seeing the errors into which our predecessors have fallen. When the mind is disciplined in this way the scope

of its inquiries will be greatly expanded and a new importance be given to circumstances previously regarded as insignificant. It is on this principle that such great advantage is derived from reading the works of the ancient physicians, who paid so much the more attention to the signs, and symptoms of diseases, as they had not the lights of pathological anatomy, to guide them. I must conclude by saying a few words on the demeanour, which ought to be observed toward sick persons, in order to gain their confidence and obtain the disclosures, which are necessary to form a proper decision on their cases. The physician should be calm and conciliating should hear with attention the communications which his patients make should put his questions to them with mildness, listen kindly to their complaints and never fail to demonstrate an active interest in their welfare.

An
Inaugural Dissertation
on
Syphilis
Submitted to the examination of the
Provost Regents and Faculty
of Physic
of the
University of Maryland
For the degree of Doctr. of Medicine
By

Thomas J. Tillett

of

North Carolina.

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pay unceasing homage at the temple of science, but without experience founded on a careful and discriminate observation at the bed-side of the sick, we can never become a faithful and deserving minister at her sacred altar. Having but barely entered the threshold, much less having free access to her inestimable privileges, I shall congratulate myself if perchance I may be allowed a badge of membership. Should I be so fortunate, some institution affording clinical experience shall have my humble services, until I am fully prepared to embark upon the sea of a professional life, to ameliorate the condition of my fellow-sufferers, by calming and quieting the ruffled billows of pain, anguish and misfortune. Without any farther remarks we will enter upon the performance of the task before us, trusting that our efforts, however feeble, will not be visited too roughly by the pruning knife of criticism.

The subject we propose taking for our consideration

is Syphilis, in all its phenomena, one of the most remarkable maladies with which we are acquainted, from its first local and seemingly innocent conditions, to its more remote and exceedingly fatal. It is derived from Σίφλος, a Greek word meaning filthy; but according to a fable of antiquity, derived from the name of a Shepherd who fed the flocks of a certain king, and being so much pleased with their number, as well as their beauty and fatness, that he insulted the sun; as a punishment for which, Jupiter Olimpus, the Father of men and king of Gods, sent this scourge upon the earth. But let it assume whatever name it may, or be derived from whatsoever source, it is a filthy disease and of no little moment, whether intended by Jupiter for the wicked shepherd, or by the Almighty as a punishment for the illicit congress of the sexes.

Respecting its origin and history =

much learned controversy has taken place and a great diversity of opinion been entertained: nevertheless confusion and obscurity still seem to envelope it, defying the profession to date its origin or to trace its history. From its sudden appearance, and the wonderful rapidity with which it was propagated throughout Europe, about the close of the fifteenth Century, in the years of 1494 and 5, a transatlantic origin was given to it. It was the general opinion about that time that it was introduced into Europe by the sailors who accompanied Columbus in that memorable voyage which added a new Continent to the world — It might have existed in all its malignancy about the time alluded too, and increased with the greatest rapidity, but we are not to infer from this circumstance alone, that South America gave it birth, or that Columbus imported it. If the =

disease had prevailed among the inhabitants of South America, or existed among the crew, it is more than likely that Columbus would have made some mention of it in the narrative of his voyage. On the contrary, we learn that not the least mention is made of the occurrence of such a disease. That it existed prior to that time we have not the least doubt. Celsus describes various species of ulcers on the genital organs, which are thought by those who have read his works not to be unlike those denominated chancre. Of the exact period of its origin we know nothing. We have not statistics from which to speak with certainty. It may have existed thousands of years before our knowledge, and in all probability has: Solomon mentioned that "he felt in his bones the sins of his youth;" and as he had many wives and concubines, we might with some degree of faith conclude, that it was a syphilitic infection of which he=

spoke, since mercury was not then dis=
covered, nor scrofula justly attributed
to the sins of his youth. We might
enumerate many such examples, but all
we can say is ~~xxxxx~~ hypothetical. The disease
exists, and our impressions are that
it has always existed to a greater or
less extent among people who practise
a filthy and promiscuous sexual indulgence,
and that it can be reproduced de novo
by impure coition.
Syphilis, if uninterrupted in its course,
contaminates the whole system; in its
headlong course, spreading devastation through=
=out every vital principle of the whole
animal economy, rendering life more loathe=
=some than ~~xxxxx~~ death itself. In its course
it passes through three distinct grades
or series of phenomena. First the local
symptoms, embracing chancre and bubo:
. 2dly, the primary constitutional symp=
=toms, consisting in an ulcerated throat=

and nose, and eruptions of the skin, which, if allowed to proceed, spread rapidly over the surface of the body; and 3dly, the secondary constitutional symptoms, indicating a more deeply seated disease, such as nodes and other affections of the bones, caries exostosis and the like; ulcers indolent in various parts of the body, blindness, deafness, alopecia, hectic fever and marasmus —

The first effect resulting from the contact of syphilitic matter, is to produce inflammation, itching, redness and pain in the part to which it is applied. As these symptoms increase, the surface gradually becomes more tender; presently serum is effused under the cuticle forming a distinct pustule; this bursts, and an ulcer is formed, depressed in the center, sloughy and foul at the bottom, with indurated and elevated edges, and a firm base; the "excavated and indurated chancre" of Hunter —

That chancre is a special and identical =

disease so distinct from all others, we believe is not doubted at the present day, though Mr John Hunter maintained the contrary opinion, believing gonorrhoea and chancre the same disease, differing only in form, and accounting for their difference of form by their difference of seat. Benjamin Bell has clearly demonstrated their difference both in nature and importance, in his treatise on the venereal disease —

Chancres make their appearance at an uncertain period after coition, varying from a day or two to several weeks; but the most frequent period according to Benjamin Bell is 3 or 4 days. —

The seat of chancre in the male is generally upon the internal surface of the prepuce, the corona glandis, the glans, or on the frenum; and occasionally upon the skin of the penis, the scrotum, the external surface of the prepuce, and the thighs. They occur in the female=

upon the nymphae, the inside of the labia pudendi, in the entrance of the vagina, on the clitoris and occasionally upon the external labia, the perineum and the thighs. —

The next variety of local symptoms is a swelling of the lymphatic glands of the groin or axilla, but most frequently of the former, is caused by the absorption of the venereal virus. It may arise however from local irritation, when it is called a sympathetic affection, which in strumous and scorbutic habits is of frequent occurrence. The term bubo is frequently applied indiscriminately to all glandular swellings, which strictly speaking is an inaccuracy, for it is derived from βουβων, the groin, which not only implies its name but its seat. Bubo then is a swelling of the lymphatic glands of the groin arising either from reflected inflammation, or the absorption of venereal matter, presenting itself as a sequence of Chancre. The latter opinion has=

been doubted by a number of authors of standing and high distinction in the profession.
Mr Allan, a surgeon of the highest order of talents, of much experience and great professional attainments, believes that bubo arises solely from inflamation excited in the extremities of the lymphatics by the chancre and not from absorption; — that the inflamation extends along the lymphatic vessels, reaches the gland and inflames it in the same manner as in gonorrhoea, the inflamation is reflected along the urethra and vas-deferens to the epididimis and testicle. Our opinions are, and we believe it is the opinion of the majority, if not the whole of the profession at the present day, that buba can arise from both of the causes mentioned; but without answering the arguments of Mr Allan we will simply cite Mr Hunter and B. Bell as authority for our belief —
Bubo is the land mark of division between the local and constitutional symptoms, a receptacle of=

the poison, thereby opposing a fortress of defence against the invasion of the constitution, at least, for a time. But this direful enemy in some rare instances passes both sentinels unobserved, penetrates the system, makes a violent attack upon the citadel of the Constitution, which if strong, and aided by a gallant Mercurial Phalanx, even at this late period can vanquish and beat him from the field —

Mr Bell accounts for it from the activity of the absorbents and peculiarity of constitution. He records many instances of the kind. I have seen one case shown to me by Prof Potter in the Baltimore Infirmary, but this was not a positive proof, since we have to rely upon the statement of an ignorant patient —

I have seen a case where a syphilitic bubo existed without any previous chancre and that in a student of medicine whose statement is certainly correct. So if it could pass one of the local affections, it is almost =

certain that it could pass both and enter the constitution; for I should think the virus would be more concentrated at first, becoming diluted as it proceeds with the circulation, thereby rendering it more liable to pass without producing the second local affection. Mr Bell has recorded a case under his observation of a father who, having been cured of syphilis for years to all external appearance, transmitted the primary disease to his offspring, and the offspring to the nipple of the nurse. This is strange, making an effect produce the original cause, but we cannot doubt it coming from such a source. Mr Ricord, surgeon to the venerial hospital of Paris, has written a treatise on the venerial, considered to be the most valuable extant. He differs from Mr Bell and substantiates the truth of his position by a series of experiments. We have not time to take up their arguments, so we will proceed to the further consideration of our subject =

The first pathognomonic signs that a bubo is forming, are heat and pain with slight stiffness in the surrounding parts. Presently the gland becomes enlarged and exceedingly tender upon pressure. When it advances to the stage of suppuration, it changes its colour from red to a dark brown colour, then to a purple hue, at which condition it generally implicates a considerable portion of the surrounding structure; it bursts the integuments and discharges its contents. Under such a state of things the tone of the contiguous parts is destroyed, the ulcer is a long time in healing, the consequence of which is an ugly scar. — —

The next variety we have to consider is the primary constitutional symptoms, precursory to the more deeply seated disease of the constitution. The period at which constitutional signs appear is =

quite uncertain, varying from a few weeks to as many months, and sometimes, though rarely, even years elapse before the disease manifests a constitutional disturbance. The soft and vascular parts of the body are sooner affected than the firm parts such as the bones and tendons; hence the line of distinction drawn between them, the one we call primary, the other secondary constitutional symptoms. Of the first variety, the parts soonest affected are the throat and nose, and at a later period the mouth and skin; this order however sometimes being reversed owing to peculiarity of constitution or accidental cause — The first manifestation we have of the throat becoming affected is slight soreness and uneasiness, particularly on swallowing, with a dull sensation of tenderness with but little pain. An ulcer is soon formed, after the foregoing symptoms, a-

copper coloured appearance. The side of the throat is most frequently the seat of this ulcer, but if unsubdued it extendes to all the contiguous parts, destroying in its course the tonsils, uvula & palate and sometimes, though rarely, deafness is produced by the inflamation extending to the Tuba Eustachiana, rendering it impervious either by plugging it up with mucus, or producing adhesion of its sides. If the nose be the part affected, the disease first seizes on the internal spongy or soft parts, thence implicating the whole structure, if the disease be allowed to advance. Its consequences are impairment of smell, and a loss of figure & prominence — When it appears upon the skin it presents itself in the form of blotches or pustules. The blotches are of a dark copper colour, sometimes of a dark mahogany colour, appearing

generally upon the abdomen, back and breast, thence all over the surface of the body. Distinct crops of crusts successively form and fall off, leaving the skin at each successive time more tender and inflamed, until it cracks open. From the openings issues a matter which forms a scab which falls off, or an ulcer is formed. Another variety consists in pimples or pustular eruptions, which soon produce a scab something like the small pox, only more ragged in appearance, consisting in scabs which lap over each other in every direction, specimens of which can be seen almost at any time in the Baltimore infirmary. After the constitutional symptoms have been present for a great while, the bones tendons and deep seated parts become implicated to a very dangerous extent. This is the secondary and last variety, and the most intractable of all. The =

disease at this stage becomes as it were engrafted upon the constitution & a part of the animal economy. At this stage the whole vital properties are polluted & the main spring of life contaminated. The patient seeks rest but finds none; the whole train of morbid symptoms consequent upon diseased bones, torment him by day and haunt him by night when warm in bed. Hectic fever, night sweats, wasting of flesh, and total imbecility of body and mind are its consequences. In short the patient leaving a life more intolerable than death itself, undergoes putrefaction out of the grave — The condition of the bones of a person who may have died with this disease, presents the appearance of old worm eaten wood full of perforations — specimens of which may be seen in the anatomical Museum of the University of Maryland —

Having described the distinguishing symptoms indicating each variety of this disease, and —

its pathology, we will proceed next to that which is of no less importance, its treatment. The very nature and condition of the disease as described, declares the urgent necessity of an early and prompt remedial treatment, for the longer it remains in the system the more difficult is it to extract its poisonous fang or repair its ravages -- Mercury is evidently our main reliance in the cure of Syphilis, & of its action as an antisyphilitic various opinions have been offered - Some imagine that it acts by dissolving the blood, rendering it thin and thereby more liable for the matter to be thrown off - Again we are told that it acts by promoting evacuations and exciting the secretions of every part of the body. Mr Hunter believed it cured the disease by exciting a violent stimulus of another kind, overcoming the venereal irritation by setting up a counter irritation - This opinion is very ably supported by Mr Ricord, Surgeon to the venereal hospital of Paris, who has written a treatise on this disease =

We denied that mercury had any specific action on chancre as advocated by Benjamin Bell, believing that it acted on a principle, identical with that which we recognize in the cure of chancre by local stimulants. Mercury as he very justly remarks "is a general stimulant to the capilary system, but whether it cures a local or constitutional inflamation by exciting an inflamation of an opposite kind, or whether it acts by virtue of its specific powers as supported by Mr. Bell, we are not prepared to say - If the matter of Lues venerea can be rendered inert, by being mixed with triturated mercury, and incapable of reproducing the disease, a circumstance recorded by Dr Cullen we have no hesitancy in advocating its antidotal powers. This seems to be the strongest evidence of its specific action ——

The treatment of chancre must vary according to the age and condition of the ulcer. If it is recent or in the process of formation we might arrest its progress by commencing =

a local conjoined with a general Mercurial treatment. If the chancre is indurated & foul we would not be warranted in employing local remedies, before premising a general Mercurial treatment, under such circumstances the indication for the general use of mercury is to remove the induration which opposes a barrier to the healing of the sore. We should be guided in our exhibition of Mercury not from the effects produced upon the mouth, but from the appearance of the chancre. The indication for mercury no longer exists when the induration is so far removed as to cease to be an impediment to the salutary operation of local applications. For procuring this result, salivation is in many instances inevitable, but nevertheless a slight soreness of the gums is quite efficient, equally as effectual as the most profuse salivation.

Of the preparations of mercury, the blue=

mass ranks first in importance. It should be administered in doses proportionate to the susceptibilities of the constitution; some persons are easily affected, while others again resist its impressions altogether. It should be given in divided doses, repeated until a favourable impression is made upon the constitution. A favourite prescription of Dr William Baker, was one grain of Calomel, a quarter of a grain of Ipecacuanha, and a quarter of a grain of Opium, given three times a day until such a time as the nature of the case demanded. But of all the preparations, which it would be useless for us to enumerate, the blue mass is considered the best. It is given in doses of two pills a day generally, sometimes three, each pill containing one grain of mercury — In whatever form Mercury may be given it should be continued sometime after the sore is=

healed to secure the safety of the patient. Sometimes a chancre will not heal readily by this use of Mercury, and to effect this, we are likely to carry it too far, when an irritable mercurial ulcer is formed more to be dreaded than the other. This should be carefully guarded against. It is carried sufficiently far when the mouth is slightly affected, though as I have before said this is no certain mark of its beneficial effects.

In all the mercurial course, Sassaparilla is a most excellent auxilliary -

Of the local treatment caustics of various kinds are employed. We should not employ them when much surrounding inflamation exists for they will do no good until such a time as the inflamation is subdued, and the tissues in the habit corrected by the prudent use of Mercury. Nitras Argenti is a caustic of the best efficacy in preparing the chancre for the process of healing by =

local remedies. After it has been employed Sulphat cupri is an excellent wash in a solution of five grains to the ounce of water. The black wash is much approved of after the separation of the eschar ~~by~~ produced by the application of caustic. In all conditions of chancre it is a matter of the greatest importance to keep it clean, for which purpose we can use no better wash than corrosive sublimate in a solution of one or two grains to seven or eight ounces of water, or a strong solution of Nitrate of silver. When we have an unhealthy habit connected with high inflamation, neither of the remedies mentioned should be employed. In this state warm solutions of opium or acetate of lead should be used frequently during the day. Mercury persevered in and improperly administered during inflamation will place the patient in danger of loosing a part or the whole of his penis.—

By the use of fomentations, poultices and general and local bloodletting, its further progress can be arrested. In some rare instances however, in spite of every effort of the surgeon, the unfortunate patient looses this invaluable member.

Phymosis and paraphymosis are not unfrequently the consequence of inflamation excited by this disease. When phimosis occurs as a consequence of inflamation, we should not perform an operation, but dress the chancres with a dossil of lint which can be accomplished by means of a small probe. When paraphimosis exists, and it is impossible to return the prepuce over the denuded gland, it will be requisite, if there is much stricture of the gland, to remove it by an operation returning the prepuce after swelling & inflamation has subsided —

The best plan of treatment under the condition last described indicating such dreadful consequences, would be to put the patient on a strict antiphlogistic regimen, and abstract blood from the general circulation, (leeches not being admissable from the liability of the bites to terminating in roses,) and poultices as a local application, with warm fomentations —.

To take up all the variety of stages which this disease assumes and give the treatment for each would be more than our time will allow. The general treatment is the use of mercury combined with local remedies, such as escharotics, soothing and emollient applications &c exhibited according to existing circumstances.

The antiphlogistic regimen should be always enjoined unless contra indicated by symptoms of extreme debility —

The question whether or not Syphilis can be cured and that permanently without =

The use of mercury has been a subject of doubt with many — The negative has been maintained by many, while others again believe that nitric acid, preparations of gold, sassaparilla, guiacum, and Mezereon, though not equal to Mercury, are quite sufficient to effect a cure in many instances.
Sir Ashley Cooper was of the opinion that the disease would quit the constitution of itself in some instances; in proof of which he has recorded cases which fell under his observation — As our observation is limited respecting the curative powers of any of the latter substances, we will neith advocate nor condemn, but exhibit mercury whenever it can be had — Dr. Potter believes that after the disease has entered the constitution, mercury is the only antidote, without which the disease remains buried in the system. like "ignis in cinires, suppositus." =
The treatment of bubo comes next in order — Buboes being tumours of an inflamatory nature and of a specific character the treatment =

very naturally suggests itself. We should employ those measures by which we can arrest and subdue inflamation, while at the same time we use the means best suited to the specific nature of the disease. In all conditions of Bubo a sufficient quantity of mercury should be employed to protect the system against the further invasion of the disease, and to destroy the venerial action present. This being premised as the most important, though not always first in the order of treatment, we should proceed with the treatment according to circumstances. Through the whole course of the disease the patient should be kept on a mild unirritating diet unless contra=indicated by signs of extreme debility; the horizontal posture should be enjoined. If inflamation be present bloodletting both local and general should be used. Camphorated mercurial ointment is an excellent means for discussing the tumour. The inside of the thigh and legs in the course of the inflamed lymphatics=

should be well rubbed with this ointment two or three times a day - Iodine ointment will sometimes succeed better. Cold astringent lotions such as lead water may be kept applied to the part with benefit. Should the tumour resist all our efforts to resolve it, increasing with a discoloration of the integuments, & a turgid fomentations and warm poultices may be employed with the view to bring it to suppuration. This however is sometimes used with the happiest effects in discussing or resolving such tumours. In most cases poultices produce the effect of softening the bubo, thereby promoting the ulceration of the integuments and the discharge of matter. It sometimes becomes necessary to open buboes with the knife. It is indicated when other means fail to open it, when the substance of the gland is entirely suppurated, and the matter insinuating itself among the surrounding parts, from the thickness of the integuments. =

If it is not opened the increasing distention of the integuments destroys the tone in the surrounding parts, which in time will produce an ulcer larger and more difficult to manage. Should it open spontaneously, but with an orifice too small for the free egress of the matter, it should be laid open with a lancet. When these ulcers become foul, the red oxide of mercury is an excellent application to clean them, followed with lint covered with a poultice. After it has become clean a solution of Sulphas Cupri, in the proportion of five grains to an ounce of water, is an excellent wash to promote its healing. When it assumes an indolent state with indurated and callous edges, lunar caustic is an excellent application conjoined with the internal use of mercury and opium to bring it to a healing condition.

Having thus briefly and imperfectly given the treatment for the primary form of the disease

we proceed next to the constitutional variety, the treatment of which will necessarily be incomplete in consequence of our time being limited, so as not to justify our entering ~~fully~~ into it so fully as its importance demands –

Treatment of venereal ulcers in the Mouth and nose. The use of Mercury internally is unquestionably the first item in the treatment; sometimes the proto=iodide of Mercury will succeed better, particularly if the disease be engrafted on a constitutional diathesis or idiosincrecy. Caustic should be applied to the sore if it be indurated to dis=pose it to heal. As a wash, corrosive sublimate may be used with advantage. Ointments made of red precipitate or calomel may be applied on the sores if situated on the outer parts of the lips or on the nose, but inadmissible in the throat from the danger of being swallowed: Compound decoction of Sarsaparilla is an excellent auxilliary. In this ulcers, when much con=irritation prevails, opium proves particularly useful=

For the cure of venereal blotches mercury is almost the only remedy and seldom fails if well conducted. Should it fail, corrosive sublimate can sometimes be substituted with great advantage. Antimonials, from their well known property of determining the circulation to the skin, are beneficially combined with mercury, in the form of Plummers pill. We seldom find it necessary to have recourse to external applications unless the eruptions become dry and hot, in which case we may use simple powders, sprinkled upon the part, as in erysipelas.
When the disease affects the bones it is more difficult to manage. This is generally the last variety and less likely to yield to remedial treatment. It is cured however in this form of the disease sometimes if properly treated. If tumours in the form of nodes be present for a very considerable time, they seldom or ever disappear, even after the virus =

in the system is corrected by the judicious use of Mercury. The best methods of exhibiting Mercury in this form of the disease, is in the form of unction, rubbed in the skin surrounding the tumours. It should not be rubbed upon the tumour in consequence of the irritation it is likely to produce. "Lugols solution" is highly recommended in this stage of the disease, particularly if be engrafted upon a scrofulous diathesis. — Finally, as nearly every variety of this disease yields submissively to the prudent & judicious use of Mercury; we hold it up as a martial antagonist, all efficient, to combat so formidable an adversary, and as the Palladium of our hopes against constitutional invasion —

In conclusion, Gentlemen, allow me to tender my heart-felt gratitude, as an offering, for the many kind favours received from you, both in public & in private —

An Inaugural dissertation on Lithiases submitted to the examination of the Provost Regents and Faculty of Physic of the University of Maryland for the degree of Doctor of Medicine. —

By Henry Groff

Baltimore Feby 20th 1842.

In no class of diseases, is the application of Chemistry to the practice of Medicine more beautifully and strikingly illustrated, than in that of the Urinary Organs. Truly this noble science has already contributed largely to the advancement of medical knowledge, and with what gratification may we not look forward to the day, when by its aid, most of the subjects now involved in obscurity will be brought to light. When we take a retrospective glance on the History of science at the first dawn of Chemistry, we behold the Alchemist endangering his life and exhausting his stores, in the pursuit of an imaginary object, which, when obtained, he supposed would recompense him for the days lengthned by the nights spent in tedious labour. But alas! like to the visionary enthusiast of the present day, he was recalled from the unfruitful pursuit, only to behold this Ignis fatuus of a high wrought imagination, dissolved in air; the profit of his labours gathered together by men of less visionary minds, and a noble science reared upon the discoveries which he himself in his all engrossing pursuit had neglected to profit by. In his experiments materials were brought in contact, whose elements united to form compounds, differing in many respects from the original; Upon the issue of these Experiments was Chemistry, recognised as a science founded upon sound principals, and governed by its own

immutable laws; When we behold the rapid progress which has marked its course, since the days of the alchemist, handing down from generation to generation adorned with the discoveries that each ensuing years oblation to the altar of science affords; can we not look with confidence to some future day when by the aid of Chemistry the pathology of certain diseases now involved in obscurity will be brought to light. although this science has done much towards the accomplishment of this object a vast field for investigation lies open and fresh honours still await the exertions of an enterprising mind. A few years only have elapsed since the subject of Lithiasis was rendered inteligible by means of an arduous course of experiments instituted for the purpose of detecting and examining the nature of urinary calculi. The discoveries of Fourcroy and Vauquelin, shed a new light upon the pathology of this disease; dispersing the clouds that had long concealed from view its true nature, and yeilding to animal chemistry, one of its brightest ornaments.

To the exertions of these men, are we indebted for the first satisfactory analysis of urinary calculi. Marcet. Wollaston and other chemists have since not only contributed to render this analysis more perfect, but have succeeded, in discovering many new and important compounds, and in establishing many facts relating to Lithiasis, The term

Lithiasis derived from the Greek λιθος is used to designate the formation and lodgment of calculi, either in the kidneys, bladder or urinary passages. We find this disease described in the writings of Celsus and Pliny; but the Ancients were wholly ignorant of the nature of the urinary calculus and acribed its formation to any but the real cause. They believed the stone in the bladder to be composed of the same earthy matters as those occurring in the mineral kingdom; and when a greater quantity of this matter was absorbed from the contents of the intestines, than the quantity of fluids in the circulating system could keep suspended, this superabundance of earth would necessarily seperate from the rest; and the depositions thus produced were much more likely to occur in the kidneys and bladder, than in other parts, from the urine being known to contain a greater proportion of earthy matter, than of the other secretions. The fallacy of these doctrines, however, have been lately exposed; and a treatment, founded upon a correct pathological knowledge of the disease, instituted. To fully comprehend the morbid changes that take place in the production of calculi, we should be familiar with the component parts of the urine, the proportion in which they naturally unite, and with the effect produced upon them by certain agents; The urine is a secretion designed for

conveying out of the body, certain substances which are useless or deleterious, and which by their accumulation, would give rise to morbid derangement. According to the most recent analyses it is composed of water, urea, uric acid, phosphates of soda, lime, and ammonia, sulphates of soda and potassa, muriates of soda and ammonia, and earthy substances, together with fluate of lime. Lime exists as a superphosphate, and is precipitated as an insoluble sub-phosphate, by the caustic alkalies. Uric acid occurs combined in such proportion with the ammonia as to form a super urate; And on the addition of Hydrochloric acid, is thrown down as an insoluble body.

The urine changes the colour of litmus and turmeric; and its acidity is ascribed by chemists, to the supersalts and not to any uncombined acid present in it. When passed from the bladder and suffered to remain for a short time exposed, the urate of ammonia, which is insoluble in cold water subsides, As decomposition proceeds, the urea is converted into the carbonate of ammonia; And this uniting with the excess of acid in the supersalts, reduces them to the state of subsalts, and thus we have an alkaline state of the urine produced, In certain conditions of the system this excretion varies, both in regard to its physical and chemical properties;

Its quantity depends upon moral and physical causes; And its appearance in disease affords to the Physician a guide in his diagnosis and Prognosis; The generation of new principles the excess or deficiency of its natural constituents give rise to the formation of various insoluable compounds. This is a brief outline of the History of the Urine, and concise as it is, it will serve to illucidate and explain many of the chemical changes resulting in the production of Calculi. —

Of these there are eight species generally recognised by Authors viz.t The Uric acid; The phosphate of Lime, The phosphate of Magnesia and Ammonia, The Fusible, which consists of an intermixture of the two preceding, the Oxalate of Lime, the Cystic and Xanthic oxide, and the Fibrinous Calculus. The Uric acid Calculus is of the most frequent occurance and may be distinguished by its brown colour, smooth and hard surface, — And by the concentric arrangement of its layers, which differ slightly in colour. It is dissolved in Alkaline solutions, but the carbonates and sub=carbonates do not effect it. Nitric acid converts into a purple coloured salt. the purpurate of Ammonia, The bone earth Calculus, consisting of phosphate of Lime is characterised by a pale brown colour, smooth surface and — slightly adherent lamina, It is disolved in phosphoric acid,

and not in a solution of potassa; which distinguish it from the oxalate of lime, and the uric acid calculus, By the action of the blow pipe the animal matter is destroyed; and residuum becomes white but does not fuse. The Ammoniaco Magnesian phosphate, so called from its being composed of the phosphate of Ammonia and Magnesia, is of a white colour less compact than the preceding, And often presents a chrystalline texture, When reduced to powder it disolves in cold acetic acid. Before the blow pipe Ammonia is driven off, and it becomes fused into a glassy substance.

The two preceding species are seldom found to exist in a separate state, for the condition of the system ~~which~~ which favours the deposition of one is equally favorable to the deposition of the other; Consequently they generally occur in Combination under the form of what is called the fusible Calculus. This is a very Common concretion. It is usually of a white colour, And when broken presents a rugged fracture; leaving, at the same time a soft dust upon the fingers, It is characterised by the fact that acetic acid will dissolve the phosphate of Ammonia and magnecia and leave as a residue the phosphate of lime, and the latter may be disolved by Hydrochloric acid. The Oxalate of Lime, or mulberry Calculus is distinguished by its dark tuberculated

surface, by being soluble in hydrochloric and nitric acids, but wholly insoluble in phosphoric. Before the blow pipe it expands, the Oxalic acid is decomposed, Carbonic acid and protoxide of Calcium generated; the former from the intense heat employed is driven off; These tests added to the general appearance of the stone enable us to recognise it with sufficient accuracy. The Cystic and xanthic oxides are rare species of Calculi, they are denominated oxides from their similarity to certain oxides in combining both with alkalies and acids; The Cystic resembles the ammoniaco Magnesian Calculus in its chrystalline texture; but is remarkable in never being accompanied by any other deposition, By the action of the blow pipe it emits a peculiar odour and is consumed. It is more compact than the phosphate of Ammonia and magnisia, and is not soluble in acetic acid, The xanthic oxide denominated from Ξανθός, yellow, gives rise to a yellow colour when evaporated in a solution of nitric acid; The fibrinous Calculus derives its name from fibrin which it closely resembles. There are many other species of Calculi but from the infrequency of their occurance they are of very little interest to the Physician. A Calculus is seldom found to exist in a simple state, that is to say uncombined with one or the other of the preceding species

And we find it generally made up either of alternate layers of different salts, or of an intermixture of these throughout its substance. It is generally formed in the Kidneys, thence it decends through the ureters to the bladder and there serves as a nucleus for deposites similar or op=posite in character to its own. The nucleus around which these depositions take place may consist of foreign matters as pieces of bougies, catheters &c. of mucus, or as we have said of a natural salt of the urine. The disease is sometimes called the gravel, when the Calculi are so small, as will permit the patient to eject them with his urine. Males are more subject to stone than females, not because the latter are less susceptable to the desease, but because the calibre of the female urethra being larger, will allow concretions to pass which would otherwise be retained and serve as nuclei for further depositions. The general symptoms of lithiasis vary with the organ in which the calculus is deposited, and their violence in a great measure depends upon the size of the calculus, and the nature of its surface

When the Kidneys are the seat of these deposites, the patient complains of pain in the loins and numbness in the thigh of the affected side. There is a retraction of the testicles and the stomach sympathising with the Kidneys, nausea

and vomiting succeed. The stone in passing from the kidneys to the bladder by its size may obstruct the ureter and thus give rise to ulceration and extravasation. This disaster however seldom befals the patient as the ureters possess the power of dilatation and adaptation in an eminent degree. The passage of the stone along these ducts is attended with such extreme suffering that the patient is often thrown into convulsions. After it has reached the bladder and acquired a size as will not allow it to pass into the urethra, an uneasy sensation is experienced about the pubic region; itching is felt at the orifice of the urethra and the penis is occasionally effected with priapism. The urine is liable to be suddenly checked in its course, when discharged in the erect position; the last drops being voided with pain and attended with a sensation as if the bladder were not entirely emptied. This symptom is produced by the falling down of the stone upon the mouth of the organ and by the spasmodic contraction of its muscular fibers. There is also a remarkable inclination evinced by patients to draw forward the prepuce whence it often becomes exceedingly elongated. The irritation often extends to the rectum causing a frequent desire to go to stool and the evacuation of the feces with much pain. A prolapsus ani is very apt

to supervene upon this condition. The irritation proceeding from the presence of Calculi in the bladder is increased in violence by undue exercise, whether on foot, horseback, or in carriages over rough roads. When the stone obstructs the passage of the Urithra and is not speedily removed — ulceration, extravasation, and Fistula in Perinaeo occur.

The symptom however most to be relied upon in a diagnostic point of view, is the previous discharge of sabulous matter A deposit of this in the pulverulent form is not to be considered a dangerous symptom, as this may be brought on by any slightly disordered condition of the stomach and can easily be removed. But when this becomes habitual and there is at is at the same time a discharge of solid (and chrystalline matter, it requires our serious consider=ation. The sound also aids us in our diagnosis. But when the stone is encased in a pouch formed by the coats of the bladder it will not always be detected by this instrument.

We cannot even with the aid of the symptoms already enumerated arrive at a positive conclusion with regard to the presence of stone in the bladder, as symptoms analagous to these are known to proceed from a deseased condition of the prostrate gland and from various affections of the bladder And indeed operations have been performed by experienced —

practitioners on patients supposed to be labouring under this affection, in whom Calculi never existed. The symptoms attendant upon renal calculi, must be relieved by antiphlogistic treatment, and by all those remedial agents which are recommended under the head of Nephritis. To soothe the pain experienced by the patient in the passage of the stone through the ureters, fomentations, the warm bath, opiates, and diluent drinks should be employed. Opiate injections, rest, a tranquil state of mind, and a removal of all exciting causes as far as it is possible, contribute much to subdue the irritation arising from the presence of calculi in the bladder.

The first in order of description is the uric acid diathesis because it is of the most frequent occurrence. The depositions in this deathesis, either occur under the pulverulent or chrystalline form. The yellow, consisting of uric acid, in combination with ammonia, imbued with the colouring principle of the urine, is generally brought on by errors of diet, and causes little inconvenience as long as no free acid is secreted. This sediment it is said, indicates an acid state of the prima via. The red deposite is composed of the same ingredients as the yellow, differing only in receiving a higher tinge from the colouring matter

of the urine. It is deposited from patients, labouring under inflammatory affections. The pink sediments are met with in fevers of an irratable nature, and are thought by Prout to consist of urate of ammonia, together with the purpurate. Prout adopted this opinion, from having detected nitric acid, in the urine of patients, depositing this sediment. Bird and other chemists, after having spent much time in examining the nature of this sediment, state that it is not the purpurate of ammonia which affords the pink colour, but some other peculiar colouring principle. The last and by far the most formidable in its consequences, is the deposite of uric acid, in its uncombined and chrystalline state. The proximate cause of this deposition, is ascribed to either the excessive secretion of uric acid, or of some other acid whose affinity for its base exceeds its own, and consequently precipitates it.

The predisposing causes, are generally reckoned a luxurious and sedantry mode of life, the too free use of condiments and liquors, ascescent and indegestable articles of food. And finally all the causes capable of giving rise to dyspepsia may likewise bring on this desease. The period of life at which uric acid is most liable to be deposited is confined to childhood and old age, as the digestive organs at that period

being weak, fermentation of food, and the production of acid are most apt to occur. This affection is thought to be hereditary and instances are not wanting to corroborate this hypothesis. It is the prevalent opinion among authors of the present age, that a treatment adopted for the sole purpose of dissolving this species of Calculus is of little avail. It is true that Potassa will dissolve it under ordinary circumstances; but when contained in the Cavity of the bladder, unavoidable causes operate to counteract this solution. When we consider the route that must necessarily be travelled before these agents can arrive at the kidneys, we must suppose them too far detuned their chemical relation too much altered, to have any appreciable effect upon the Calculus itself; And that to produce this effect they must be given in such doses as would materially interfere with the healthy condition of the organs with which they may come in contact.

It is likewise known that the Phosphates have a tendency to concrete around any insoluable body particularly, when afavoured by an Alkaline State of the urine. If it were then possible to administer the alkalies in the exact proportion that sufficed to neutralize the excess of acid in the system still an insoluable body would remain, around

which there would be a tendency of the phosphates to form concentric deposition, If on the other hand we administer them with the view of dissolving the Calculus, we must necessarily give them in such quantities as will not fail to reduce the super into subsalts. These salts will then be formed, having the preexisting uric acid for their nucleus. The writings of Sir Everard Home furnish numerous examples of this kind, He remarks that in most of these cases treated with alkalies, and Examined post-mortem, this phenomenon presented itself, Another important item to be considered in the chemical treatment is the remarkable tendancy of this diathesis to pass over to the phosphatic. the reverse seldom having occurred. The phosphatic Calculi also increase more rapidly in bulk than those composed of uric acid, and give rise to more irritation. These are a few of the obstacles represented as being opposed to the successful treatment of the uric acid diathesis by chemical means. Although as it has been observed the alkalies cannot be administered with such precission as exactly to neutralize the excess of acid secretion without likewise favouring the deposition of subsalts, Yet I should suppose that by giving these agents for the purpose of correcting the acid condition

of the primæ via, we could accomplish all the ends for which alkalies are useful, without the risk of favouring a more dangerous deposition.

The first on the list of remedial agents are the carbonates of the alkalies. They are not so liable to irritate the stomach from long continued use, as the oxides, and being found to answer equally as well, are generally given in preference. When examining the chemical properties of uric acid, we remarked that the carbonates did not effect it; And the benefit often derived from their use, must therefore be ascribed to their antilithic and not to their lithontriptic power. Magnesia is highly recommended by Doctor Brandt. It is particularly useful in cases attended with indigestion and an acid state of the stomach. Aqua calcis has also been employed, but its antilithic power seems to be inferior to the other articles of its class.

Astringents too have been employed but what virtue they possess, other than giving tone to the digestive organs I cannot conceive. It is said that alkalies very often give relief by acting upon the rugged surfaces of the calculi, and thus rendering them smooth. To this is attributed the sudden subsidence of irritative symptoms

during their administration. Majendie supposes that as nitrogen is the principal element of uric acid, the abstinence from animal food would tend favourably towards a successful treatment. This supposition is based upon his conceiving uric acid to be secreted in excess by all carniverous animals. The experiments of Wilson Philips however induce us to draw a contrary inference. Besides in some carnivarous animals, we do not find this excess of acid secretion as mentioned by Majendie. The insensable perspiration restores the blue colour of Litmus and the yellow of Turmeric. Might not the promotion of this secretion, deminish the quantity of acid secreted by the Kidneys? As the healthy condition of the urine depends in a great measure upon that of the stomach, the patient should conform to certain dietitic rules. His meals should be taken at regular hours, and his food well masticated previous to being received into the stomach. An abstinence from liquors and ascescent and indigestible articles of food should be enjoined. The condition of the liver bowels &c. must be attended to. If the mind be acted upon by any of the depressing passions, its tranquility should be restored by means best known to the intelegent and sympathesing Physician

The phosphatic diathesis often succeeds to that of the uric acid; although the former may exist as the original affection. The deposites in this diathesis may occur either in the chrystalline or pulverulent form, according to the nature of their composition. The phosphate of ammonia and magnesia, and the phosphate of lime occur under the pulverulent form, the phosphate of ammonia and magnesia under the chrystaline.

These sediments are of a yellowish white colour, and attended with a copious secretion of pale coloured urine, which soon undergoes decomposition and becomes alkaline. It is thought that these concretions seldom originate in the kidneys, but are usually formed in the bladder. When this happens, the symptoms of an affected kidney are not experienced. Prout is of the opinion that the phosphate of lime is often derived from the mucous coat of the bladder,— the phosphate of ammonia and magnesia solely from the kidneys.

It is generally admitted that the former salt may be secreted from the mucous surface, as by any other mucous surface, when it is the seat of inflammatory action. Still it is denied that this contributes in any degree to the production of calculi, and is thought rather to be the

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The following symptoms are mentioned by Prout, as being mostly attendant upon the phosphatic diatheses; "great irritability of the system and derangement of the chylopoietic viscera in general; such as flatulence and nausea, obstinate costiveness or peculiarly debilitating diarrhoea - or ~~both~~ frequent alternations of both: And the stools are extremely unnatural, being either nearly black or clay coloured or sometimes like yeast. These are attended generally by more or less sensation of pain, uneasiness or weakness in the back or loins. There is a sallow, haggard expression of Countenance; and as the desease proceeds symtoms analagous to those diabetes appear". The proximate cause of the phosphatic dispositions attributed either to the excess of alkaline or the deficiency of acid secretion ~~in~~ the system. The predisposing causes generally mentioned, are: An enlarged prostrate or strictures of the urethra, blows inflicted upon the spine in the region of the Kidneys and whatever produces a nervous state of the system; as fear anxiety &c. The use of hard waters, as a drink is also mentioned as favoring the development of this diatheses, yet Stone seems to occur as often in places in which this hardness of the water is wanting, Marcet and Brandt believe that the alkaline treatment pursued in the uric acid diatheses when carried to excess especially favours the phosphatic deposits even at days

effect, than the primary cause of such production, * Prout's opinion concerning the exclusive origin of the latter salt may be true; yet if we believe in the chemical changes which are said to take place upon the retention and decomposition of the urine within the bladder, we must be induced to dispute the correctness of it. If phosphate of magnesia exist as a natural and soluble salt, of the urine, it must decend along with this fluid to the bladder; and when from any cause this becomes retained beyond the usual period, Urea is decomposed and carbonate of ammonia generated. What causes then operate, to prevent the ammonia from entering into combination with the phosphate of magnesia, since it is known that from neutral or alkaline solutions containing phosphoric acid, ammonia and magnesia this salt subsides? *

As alkalies are used in the uric acid diathesis, so are the acids used with regard to the phosphatic. Of these, the sulphuric is generally administered in preference, on account of its more uniform tonic effect; and being less liable from a long continued use to give rise to the disagreable consequences so apt to supervene upon the administration of it; other acids Brandt says

that "nitric acid speedily brings on symptoms of dispepsia as flatulency, sour eructations, loss of apetite &c. whilst the muriatic is apt to give rise to a troublesome diarrah. A good substitute for any of the preceeding acids when the peculiar condition of the patient, renders ~~them~~ inadmissable, is the carbonic acid; The vegitable acids; The tartaric, citric and acetic, form useful as well as pleasant draughts. To allay the irritability so often attendant upon this diathesis. Opium Hyosciamus &c. may be employed with advantage, the patient being at the same time confined to the horizontal posetion.

He must also conform to certain dietetic rules and what ever incidental symptoms may arise during the course of the disease, must be relieved by such treatment as the nature of the case will require. The next in order is the oxatic acid, diatheses, This acid is foreign to the body in its normal state; and when secreted, gives rise to an insoluable compound in the urinary passages, by uniting with the lime of the natural phosphate of the urine. It is thought to be generated by a disordered condition of the stomach, and having entered the circulation, is eliminated by the kidneys! or to dependant upon, an abnormal condition of the secretory function of these Organs, As Calculi composed of the oxalate-

of lime generally exhibits a rough tuberculated surface great constitutional irritation, the abrasion of the lining mucous membrane and the consequent effusion of blood, must often occur. To the latter circumstance is attributed the dark mulberry appearance of this species of calculus, The treatment to be pursued in this diathesis, does not differ from that, already laid down under the head of the uric acid diatheses, With regard to the remaining varieties of calculi, viz. the cystic, xanthic and the fibrinous: they are of unfrequent occurrence and are seldom treated of by writers, on this subject. The modus operandi of acids and alkalies in lithiasis is involved in much obscurity. Some authors are of the opinion that they act primarly upon the stomach, giving tone to this organ, correcting its unhealthy condition, And in this manner exerting an indirect influence over the secretions of the kidneys. It is the opinion of others, that they go directly to the kidneys unchanged and thus produce beneficial results. That the benefit often derived from the use of acids and alkalies in lithiasis depends more upon their antilithic, than lithontriptic power is in my opinion evident; or why should those agents

which are capable of effecting the solution of different Calculi out of the body, have been superceded in practice by others, which, although not possessing this power, are able to correct the disposition favourable to their formation, The Carbonates of the alkalies which do not disolve the uric acid calculus, are yet found from experience to be equal if not superior to the oxides in the treatment of the uric acid diathesis. The Sulphuric and carbonic acids, which can hardly effect the decomposition of the phisphatic Calculi, without at the same time giving rise to compounds equally insoluble, are yet administered in preference to the nitric or muriatic, in the phosphatic diathesis.

The oxalate of lime is insoluable in a solution of the alkalies; but by digestion in a solution of the carbonate of potasa it is decomposed the insoluable carbonate of lime remaining, It is soluable in nitric and muriatic acids, If we were however to administer these acids for the purpose of disolving this species of Calculus, we would no doubt favour its further deposition. If as it is said the cause of this deposition depends upon the morbid secretion of acid.

Besides the means already laid down for the relief of patients labouring under this affection, the injection of agents into the

bladder, to alleviate the pain, and to dissolve the calculus has been used. But experience has unfortunately proven that these cannot be introduced of sufficient strength to produce the desired effect without, at the same time giving rise to great irritation and organic decease. As a last resort when all else fail and the health of the patient begins to decline recourse must be had to the lithotomy knife and indeed the removal of the stone by a surgical operation can alone be relied upon to ensure a final cure. —

Henry Gross

An Inaugural dissertation On Hysteria.

Submitted to the examination of the Provost, Regents, and Faculty of Physic, of the University of Maryland, for the degree of Doctor of Medicine.

By Benjamin R. Gray of Baltimore Maryland

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It cannot, therefore, be deemed surprising that a disease, pre-eminent in the irregularity and variety of its symptoms, should defy all attempts at a rigid definition, although a description of its principal phenomena may be given sufficiently specific for practical purposes. The difficulty of conveying a correct idea of the varied forms of hysteria, I think, may be greatly diminished by adopting the arrangement of Dr Tweedie, as laid down in his most excellent work on the nervous system, that is, dividing the disease into three forms, the regular, irregular, and complicated. This division will best enable us to portray the most characteristic features of the malady as they really occur. The first form, or regular hysteria, may be generally distinguished by its peculiar paroxysm or fit; the patient is likely under the influence of slight exciting causes, either physical or mental; and frequently without any appreciable cause, to have sudden spasmodic attacks; to complain of pain or uneasiness, in the left iliac region or hypogastrium, or in the left side. A sensation as if

a ball was moving towards the throat is felt, and produces what is called by authors globus hystericus, and was believed by the Ancients to be the Uterus, which they considered an animal crawling up in the throat. In some cases headach, stiffness about the larynx, dyspnoea, general uneasiness, cramps, &c precede the attack; in others, a vermicular or undulating motion of the abdominal muscles attends the rising of the ball or globus. There is also present great mental and bodily agitation oppression of the chest, palpitation and difficulty of speech: In this situation the sufferer will often fall and beat her breast, or pit of her stomach, in which region there is often great pain. The breathing is slow and difficult, the abdomen much distended and flatulent. Sometimes the patient attempts violence to herself or those around her. The limbs are generally motionless, or convulsed, as I have witnessed in a case during this winter, where the patient first complained of pain in the dorsal vertebra which gradually moved from thence to the left leg, which was entirely motionless for some days. The violence

of the contortions may occasionally intermit, and again be renewed. After a short time, either copious eructations of air take place, or anguishing in the epigastrium, or in the left side, supervenes. The paroxysm generally terminates with immoderate fits of weeping or laughing, the patient often recollecting, but being unwilling to acknowledge what has happened. She usually complains much of fatigue, and suffering from paralysis of the bladder, and of the muscles, either of voluntary or involuntary motion. There generally follows a copious secretion of limpid urine. With these later symptoms the attack may cease, and not return for a considerable time. I believe it is remarked by most writers, that those who are subject to attacks of regular hysteria, are predisposed to suppressed breathing, sighing and like symptoms, under the influence of ordinary emotions. When hysteria assumes a convulsive form, spasmodic actions follow the feeling of suffocation occasioned by the globus hystericus, as it reaches the throat. In delicate women with great mobility of the muscular system, the convulsions are feeble

and generally of an asthenic character; but in the strong and plethoric they are more sthenic and tetanic. The limbs are variously agitated—the patient often beats her head against the bed, tears her hair, screams, shrieks, laughs or sobs, and cries immoderately. Frequently the trunk remains stiff whilst the limbs are tossed in every direction. The muscles of respiration are greatly affected, and breathing is performed with difficulty; as there is constriction in the situation of the diaphragm accompanied with hiccup. The respiratory efforts are rendered still more laborious by spasm about the throat, pharynx, and glottis. The abdominal muscles are tense or irregularly constricted; the action of the heart is increased with the severity of the convulsions. In some cases, however, it is not much, if at all accelerated; in others it is very irregular and unequal. The veins of the neck are usually distended, the carotids beating with more than ordinary strength; the face is generally flushed and turgid, though in delicate females it is pale. The extremities are sometimes cold, though the temperature does not vary much.

The second or irregular form of Hysteria is more barious in its character than its intensity. The bowels are generally torpid or the digestion deranged the catamenia are usually suppressed. Tenderness on pressure at the sides of the cervical vertebra, is usually an accompanying symptom, but not generally suspected by the patient. This symptom is believed by Dr Tate to be an infalliable guide. He says he scarcely ever met with a case where it was not present — it is only to be discovered by close examination. Although he relies so much upon it, I believe most authors do not place so much confidence in it, as I have seldom seen it mentioned. In this form of the disease there is scarcely any part of the function which it may not disturb, so as to excite the suspicion of organic disease; but the rapidity with which it passes from one part of the system to another, and the difference between the symptoms, are sufficient to indicate the true malady, although there is perhaps no class of cases where the errors of diagnosis are so frequent. The most constant

symptom is pain under the left mamma. The patient can generally put her finger on the very spot, which is not larger than a dollar. It is very circumscribed, is seldom attended with cough, but frequently with palpitation of the heart; it is often increased by a forced inspiration or by pressure. The precise source of this pain has not been accounted for by authors. There is great susceptibility to impressions either mental or bodily. In either case, the one acts upon the other. The mental excitement upon the organic functions, and the local irritation upon the mind, and brings within the range of its morbid influence, various parts of the nervous circle. The altered sensibility attendant upon the local affection being manifested, not only in the primary seat of disturbance, but also in other parts, with which there is the most intimate sympathy in particular cases, or which owing to their naturally exalted state of sensibility most readily participate in the original affection. The difficulty of swallowing, in this disease, is sometimes so great as to excite a suspicion of Hydrophobia; and there is no doubt but many

cases of this dreadful malady which have been reported as cured by authors, were but simple cases of hysteria. The opposite condition of this, a remarkable avidity for swallowing liquids, has been observed. Dr Graves relates a case, in which any attempt to prevent the process of swallowing, was followed by hysterical convulsions. The œsophagus is sometimes affected. Sydenham observes that hysterical patients often spit a thin saliva similar to that produced by mercury. The same has also been noticed by Stoll Darwin and others: Dr Graves thinks it is secreted from the fauces. D. M. Journal No 3. The laryngeal muscles may also be in a state either of irritation or of deficient power, producing a spasmodic closure of the glottis, with a convulsive cough threatening suffocation. This is seldom fatal, and may be distinguished from chronic laryngitis by the absence of fever, pain on swallowing or of tenderness on pressure, though the two diseases may exist together. The joints are frequently affected in hysteria, especially the hip and knee, which have been mistaken for serious local disease. Dr Tate mentions a case, where the patient had

been treated for the hip disease, which he found to be nothing more than hysteria. This may be distinguished by the limb not wasting away. Pain in various parts of the abdomen, or in the abdomen generally, especially about the period of the catamenia, may be the principal complaint in irregular hysteria. The pain often assumes the colicky character, the colica hysterica of writers. It frequently changes its situation, & is sometimes accompanied with excessive tenderness and great inflation of the bowels; it may then be mistaken for peritonitis. The sudden disapearance, and return of the symptoms, the pulse, the facal and urinary excretions, will be sufficient to distinguish the difference in the two diseases: the urine will be natural or pale and copious, instead of being scanty and high coloured as in peritonitis. As the symptoms in this form of the disease are very similar to those enumerated in the first or regular, it would be useless to add more, but I will here take the opportunity to give credit to Dr Lowcock for many of the symptoms which I have enumerated.

I ~~having~~ now arrived at the third and last division,

which embraces the complicated form of the disease. Where a person of hysterical constitution is attacked with other diseases, the symptoms of the two may be so blended, as to modify, or even conceal the more important of the two diseases. Such a complication may increase the fearful aspect of the principal disease without augmenting the danger, although it may augment existing disorder by eventually promoting inflamatory action at the extremities of irritated nerves. (Dr Tweedie page 329.) Hysteria may occur at the crisis of, or during recovery from fever or inflamatory diseases. It may also occur during the convalescence from inflammations of the respiratory organs in the form of croupy breathing attended with spasmodic action of the respiratory muscles. Such phenomena may occur in males as well as females, during the debility occasioned by long continued fevers. It is sometimes complicated with asthma. Hysteria may also occur during pregnancy, although it is generally believed ~~believed~~ to be suspended by this state, as well as by lactation. When hysteria is complicated with other diseases, it is generally owing to the tempe-

-rament and constitution of the patient, and to debility and exaustion of nervous power, originating from disease or from mal treatment. As the complications of hysteria with other disorders are so numerous, it would be almost an endless task to attempt a description of them. I shall therefore content myself with what has been said above, and enter at once upon the dignosis, and causes of the disease. The more fully developed states of hysteria may generally be distinguished from other affections, although this may sometimes be very difficult, and particularly the more irregular forms of the disease, as there are few diseases which hysteria does not frequently simulate. It may be distinguished, usually, by the variety, changeableness, and irregularity of its symptoms; the sudden transition of violent derangement, to the almost natural state. Hysteria when fully formed may be mistaken for Epilepsy, and is more likely to occur when the former disorder passes into the latter, as it frequently does in plethoric persons. A combination of the two may exist,

loss of consciousness, & the distortion of the mouth and eyes, in determining the existence of epilepsy. When hysteria is about to pass into Epilepsy, distortion of the eyes, and of the muscles of the face is the surest indication of the transition. It is of the utmost importance to humanity and to the family of the patient, that these maladies should be correctly distinguished. Epilepsy is an hereditary disease and is generally incurable, it weakens the intellect and the understanding of the patient, circumstances which can't be imputed to hysteria. It is for these reasons that every physician should pay the most strict attention, and carefully examine every symptom before giving his diagnosis, as upon it depends the future peace, happiness and comfort of the patient, and her friends. The most frequent causes of hysteria are, the emotions of love and jealousy; longings after ardently desired objects, or unsated desire; disorders of menstruation and many others which I have previously enumerated. Those of Epilepsy, on the other hand, are hereditary predisposition; fright; terror; falls &c

Hysteria and Hypochondriasis have been considered by some authors to be identical; this opinion is now I believe generally disregarded by the profession. There is little doubt, however, that the two diseases are nearly allied to each other, and are frequently found to be associated in females; most hysterical females may be said to be hypochondriacal, especially if hysteria has become habitual. Spasmodic disorder is very rare in one of the complaints, and very common in the other. M. Brachet says hysteria is a spasmodic affection of the cerebral nervous system, to which he has given the name of "cerebral neurospasm;" and that hypochondriasis is a vitiation, an aberration of the two nervous systems, & which he calls "cerebro ganglial neurolaxy." Hence he concludes that they are not identical affections — they differ in their seat and nature, the phenomena in the one being spasmodic, in the other vitiation of function. The two may generally be distinguished by the following symptoms: in hypochondriasis there is usually great inactivity, self interest, and a disposition to have

recourse to a variety of physicians, and also to conceit that they are affected by every disease they may hear mentioned. In hysteria, the patient is usually contented with the physician, and seems to take great interest in the welfare of others. It may be mistaken for many other diseases, as I have had occasion to mention before, but there are generally present certain symptoms, which will enable the physician to form a correct diagnosis. The causes of hysteria are next to be considered, and are as numerous almost as its symptoms. I shall therefore enumerate the principal and most important, as they have been noticed by various authors. Hysteria is very rarely observed before puberty; the period of life when females are most liable to it is from fifteen to fifty, seldom occurring earlier or later in life, and is more likely to occur about the ages of thirty or forty. It is almost entirely confined to the female sex, and is seldom seen in males, and it has been denied by some that men can have it, but there is abundant

proof against this vague doctrine, and that from the most intelligent and eminent men in the profession. It is the opinion of our very venerable and learned professor of Theory and Practice, that men can have the disease, for he has had patients himself with this disease. Temperament and diathesis evidently predispose to the disease. The nervous, where the nerves are larger and the arteries smaller, is a predisposing temperament — also the sanguineo nervous of Dubois. As this state of constitution is generally derived from parents, the opinion of Frank Hoffmann and others as to its frequent dependence on hereditary predisposition, cannot be doubted. Children of weak and debilitated parents, and those of an impaired constitution, either originally, or from early management and education, are most liable to this malady. Perhaps no disease depends so much upon the management of childhood and the moral and physical education of early life as this. A luxurious and delicate mode of living, a neglect of whatever promotes the powers of the constitution, especially exercise, and of early rising and retiring, too great excitement of

the imagination and of the emotions to the neglect of the intellectual powers, and moral sentiments; the various means by which the feelings are awakened and acute sensibility promoted, and various other like causes, tend, especially at a period when the powers of the mind and conformation of the body are approaching developement, to produce that state of the nervous system of which hysteria is one of the most frequent indications. It is believed by many that indulgence in solitary vices and sexual excitement is a frequent cause of this, as well as of many other disorders. Unrequited love is frequently a cause, or is thought to be, but there is little doubt that it is quite as often produced by disappointed lust, in which desire is the only ingredient, as from pure, simple, unrequited love. Irritation of the gastro intestinal mucous membrane, by stimulating ingesta, particularly such as act on the colon and rectum, as large doses of aloes and other medicines, morbid secretions or fæcal matter in the large bowels, and the irritation of worms the hysteria verminosa of Sauvages, hemorrhoids and other morbid states of the bowels, will excite this disorder. It may be caused by excitement of the nerves of the uterus or ovaria, or irritation of them in connection with any irregularity of menstruation.

The Pathology of this disease is shrouded in so much obscurity, that as yet little has been advanced by authors which would justify us to arrive at any definite conclusion with regard to its true nature. The want of proofs in support of any doctrines which have been advanced as to its nature, I believe, have arisen from the fact, that few persons die from this disease alone, and an opportunity for examining the principal viscera is seldom offered. This is undoubtedly the chief cause that has given rise to so many vague hypothesis upon this subject. The ancients, and many of the moderns, referred hysteria to the womb, and hence the origin of the name. The ancients however ascribed powers, functions, properties and motions to the uterus, which modern knowledge has proved to be erroneous. There is no doubt that this organ, influenced as it most probably is by the nervous and vascular states of the ovaria, performs a very important part in the economy. Some recent writers have ascribed hysteria to irritations of the uterus, brain, intestines, or even other internal viscera occurring in delicate nervous or susceptible persons. Willis ascribed hysteria to disorder of the brain. The same view was adopted by Georget. More recently Dr Gate contends that hysteria arises from a morbid state of the spinal cord, connected with disorder of the womb. Dr Copland believes this spinal irritation to be merely a consecutive and contingent disorder, and one by no means generally observed. Pinel, Willermay, Lobstein and Foville consider it entirely nervous, or an excited state of the nerves supplying the organs of generation.

Pajol on the contrary infers the existence of chronic inflamation of the uterus as the cause of the disease. There is but little doubt, I think, that Dr Coplands opinion on this subject is more plausible than any that has yet been advanced. When we trace the intimate connection existing between the nerves of the uterus, the kidneys, the urinary bladder, the intestinal canal on the one hand, and the spinal and sacral nerves on the other, and more particularly when we consider the fact that the nerves are larger, ~~when~~ at the period when the phenomena of hysteria are present, than at any previous or subsequent period in life. It is the opinion of Dr Copland that the nervous or vascular condition of the sexual organs, connected with increased sensibility and irritability of the sentient and motive systems, and consequently augmented susceptibility of impressions, from mental or physical causes arising either from original conformation, or from acquired habit of diathesis; that when these states are excited either by mental emotions or other circumstances, the affection is propagated by direct or immediate sympathy by the organic nerves, to the digestive tube and urinary organs on the one hand, and to the cerebro spinal nervous system on the other; and thus the phenomena constituting the hysterical seizure are developed. This is perhaps the most rational opinion that has been given concerning the pathology of this disease. I believe, as I have before said, that there is no just grounds

upon which a correct opinion can be formed, which will give a clear or satisfactory view of the pathology of hysteria; and it is only by combining the opinions of those who seem to have written best upon the subject, that we can hope to have a correct idea of it. It is without doubt a nervous disease, not dependent necessarily upon any irregularity of the functions of the uterus, or any other of the internal viscera; for we see cases where the catamenia are not disturbed in any manner, neither suppressed or increased; and I believe that the disordered functions of this, as of other organs, are the consequence, as well as the cause, of hysteria. It is probably owing to the obscurity of the pathology of hysteria, that it has been rendered so difficult to be treated. Perhaps there are few diseases less under the control of medical treatment than hysteria, and few that have been worse treated. There are various circumstances connected with hysteria, which often occur to render the management of it difficult and disagreable. The patients and their friends generally believe that relief should speedily follow a recourse to medicine, and the physician himself confirms the opinion by stating, that there is little danger, and the patient will soon be cured. If such a result should not happen, confidence is lost, and advice is sought from other quarters. The physician should

be candid, and state to the patient the true nature of the case. He should endeavour to secure her confidence by honest means, and impress herwith the idea that unless he is allowed time and opportunity for the administration of proper treatment, it will be useless for him to undertake the case. Having thus acted, he will be likely to save his reputation and gain the confidence and esteem of the patient and her friends. There are many circumstances in the pathology of hysteria which demand strict attention in the treatment. The particular form of the attack, whether regular, irregular, or complicated; the condition of the nervous system, with reference to increased sensibility and irritability; the excitement vital turgescence or other disorder of the uterine system; the state of the circulation, whether accompanied by plethora, general or local, or a deficiency of blood; the functional or other disorder of the digestive canal. Unless these circumstances be carefully attended, our treatment will generally be unsuccessful. The first indication in a paroxysm of hysteria, if attended by severe convulsions, is to prevent the patient from injuring herself. Her clothes about the waist and neck, should be loosened, and free air admitted. The next is to shorten the attack. The best means are to apply cold water to the face, and stimulating scents to the nose. If the patient can swallow, give ice water, ether, or fœtid spirit of Amonia; if she cannot, administer an enema of turpentine, assafœtida, or camphor, combined with castor oil.

If the attack should assume an epileptic character, attended with much cerebral or general plethora, bleeding should be resorted to, either general, or by the use of leeches, or cupping at the back of the neck, & cold water should be applied to the head. Where there is not much cerebral plethora, or difficult deglutition, the internal use of diffusible stimulants have been generally recommended, such as ether, amonia, valerian assafoetida &c are the best. If the uterine functions be disordered, as they generally are in this disease, particular care should be paid to their different states. If there is much debility, as indicated by the colour of the surface, the lips, and by the states of the pulse, the chief dependence must be in preventing local excitement and irritation, & in the use of cooling tonics, given in conjunction with anodynes and sedatives. The sulphates of iron, zinc and quinine, in combination with small doses of camphor, extract of henbane, or of hop, are generally used. When the bowels require to be opened, cooling aperients, such as the bitartrate of potash, with the nitrate, and the confection of senna may be used. If the catamenia be disordered, either excessive, or too frequent, tonics and astringents, with anodynes and refrigerents are to be administered. Sponging the lips with cold astringent lotions, will be of great service. With reference to the nervous and vascular systems, little need be said. If there is much nervous sensibility and irritability, the patient should take frequent and regular exercise in the open air, should rise early, use the shower bath and

if, with this state of the nervous system, there be combined much vascular plethora, either local or general, it may be removed by the same mode of treatment, with the following additional remedies. If the vascular system is deficient, the preparations of iron may be used with much benefit, together with cooling aperients. Irritation of the digestive tube, in connection with uterine disorders, is treated, usually by spare diet, tonics, cooling aperients, and diaphoretics; but if attended with much pain in the epigastrium or abdomen, leeches or cupping should be applied. We will now treat more particularly, of the irregular or complicated form of the disease. But little need be said of the treatment of this latter form of the disease, as the treatment already laid down is nearly applicable to it. When the patient suffers from pain in the region of the colon and left iliac region, or in other parts of the abdomen, with flatulent distension, increased sensibility, and other symptoms resembling peritonitis, the proper treatment would be warm embrocations, anti-spasmodics, and anodynes, with an enema of turpentine and assafœtida. Pain in the mamma is generally sympathetic of irritation of the uterus or ovaria, and is usually attended by pain over one or more of the dorsal vertebræ, and may be relieved by leeches to the mamma, or to the thighs, and sometimes to the hypogastrium, assisted by cooling diaphoretics. Irritation from the uterus is also frequently extended to the ureters and kidneys, by sympathy, and is indicated by pain in those regions. The alkalies and their subcarbonates are generally employed, with such other means as

the symptoms of the case may require. If there is much pain in the spine, attended by plethora general or local, leeches and external irritants, in conjunction with purgatives, must be used; but if attended by much debility, tonics, such as are usually employed, may be given. If there be general plethora with full pulse, some viscus is usually implicated, as the stomach or liver. In this case some strong purgative should be used, such as the pill compost. of Hydrarg, aloes, colocynth and rhubarb, as recommended by Dr Potter. Hysteria produced by mental disorders, is to be treated by remedies, which have been mentioned before when speaking of that subject, and by every means calculated to allay mental excitement; Marrying is said by some to have cured this form of the disease. Dr Potter mentions a case in his lectures, which occurred in his practice, where the patient could be relieved by no other mode than by marrying. With the above remarks on the treatment, I finish the consideration of the subject of Hysteria — a subject no less interesting, than it is important. I will here state that the views given in this dissertation have been chiefly collected from the best authors on the subject. It would be a breach of that duty which my feelings claim, if I were to close this essay without an acknowledgement to the several Medical Professors of the University. Permit me then gentlemen to present to you my sincere thanks, for the instructions I have received from your lectures during my pupillage, and be assured of my faithful remembrance

An
Inaugural Dissertation
On
Intermittent Fever.
Submitted to the
Examination of the
Provost, Regents and Faculty of Physic
of the
University of Maryland.
For the
Degree of Doctor of Medicine,
by
Edward Arell Pye,
of the
County of Charles
and
State of Maryland.
February 20th 1842

Intermittent Fever -

Which I intend to treat of in this paper, is a disease pregnant with interest & richly deserving of the attention of Medical men. There is, perhaps, no disease in the "range of Nosology" on which more has been written - so much so, indeed, that every word I may utter, every line I may write, must be but the echo or the Copy of what has already been written & said -

If I might, however, hazard an opinion, Much - very much, more has been written than known about this disease -

Opinions have multiplied on opinions, Theories have grown out of theories, until reason seems to have exhausted her store, and imagination has no more vagaries to lavish, and still (till very lately) all was speculation - all was uncertainty!!

And Can I hope to shed light upon a theme which has, for Centuries, baffled the wisdom of the wise? - Can my feeble taper penetrate the darkness

that the lamp of genius could not 2
illumine? My endeavor shall be to
garner up from the wreck of opinions all
that may seem most valuable - to winnow
carefully from the chaff of idle speculation
the sound & wholesome grains of useful &
practical knowledge - If it should be asked
why I have selected a disease confessedly
so difficult to do justice to, I answer, that our
long intimacy must account for my prefer-
ence - Living in a bilious country, as it is
called, I have seen more of this disease than
of any other - the symptoms that I shall
have occasion to describe I have often felt
myself - I cannot hope that this paper
will be free from many errors, both in
style and arrangement, - but it must be
remembered that it is my first attempt.

I pretend saying but a few words in
regard to the history of Intermittent fever -
I think it unnecessary in a composition
of this character - It is sufficient to observe,
that it was known to the most ancient writers,

that they knew nothing of its treatment may be inferred from their ignorance of its pathology - "Concretions" in the blood - "viscidities" and "acrimonies" of the "humors" "fermentations" - these were the expressions with which their theories of fever abounded - but it was impossible that they should have known anything of the nature of fever, when their ideas concerning the circulation of the blood were so vague & indefinite, not to say childish & puerile - But our modern writers have entertained very little better views in regard to the pathology of Intermittent than the ancients - Cullen defines Intermittent fever - "a fever arising from Marsh "Miasmata, consisting of many paroxysms with "intermission, or at least with an evident re= "mission intervening, returning with re= "markable exacerbation, & in general, with "shivering, one paroxysm only in a day". This definition is objected to - In the first place, a malarious origin is considered essential to its existence - Now very good authority think

that it is capable of being produced by other causes - according to some, atmospheric vicis=
=itudes have given rise to all the phenomena of intermittent fever - local irritation also may produce it - As for there being "one paroxysm only in a day" - it is generally known that there may be more - Who has not seen instances of "double quotidian"? I have myself seen a distinct case of the kind - not happening once but occurring on several successive days - One may define intermittent fever, says Dr. Stokes, "A primitive or essential fever, composed of many paroxysms, which recur at certain periods, and in the intervals between which we have a state of apyrexia, or freedom from fever" - This definition Dr. Stokes admits to be "to a certain degree, imperfect". It seems however correct, as far as it goes - We frequently meet with cases, as he observes, in which the periods of attack are by no means regular or certain, and the state of apyrexia between the paroxysms not well marked -

It has, indeed, been denied that there ever is a period of complete apyrexia between the paroxysms — and the epithet of Intermittent has been "questioned on pathological principles" — Now it is not for me to dispute the points with those who have grown hoary in the pursuits of science — but with the liberty which the nature of these remarks, I think, allows me, and with the utmost deference to such high authority, I consider this, at least a profitless refinement in names, if not an untenable proposition — and what are the grounds for such an assumption? That in nine cases out of ten there is no perfect intermission between the paroxysms?

But this is no reason for denying that there ever is a perfect intermission — I admit that a great majority of fevers are complicated, so much so, indeed, that the list of simple or uncomplicated is comparatively short — And here, it seems to me, in observing the large proportion of fevers,

that are complicated in their nature, the author alluded to has lost sight of those which are purely simple - but this rationale is thought necessary to account for the phenomena of this disease - now I must confess that I cannot conceive how, supposing disease to exist during the period intervening between the attacks, can explain the return of the paroxysms - It would be better philosophy to acknowledge our inability to explain these phenomena, than to attempt it by assuming a proposition which we cannot prove - There may indeed, be fever existing between the paroxysms - but it is a fever that we cannot detect - it is invisible to the eye of experience - Our Professor of Practice, in the course of his valuable lectures on Intermittent Fever, instanced a case in which the paroxysms returned only "once a month", & during the intervals the patient performed his usual duties, and, to all appearance, enjoyed "good health" - Who can suppose

that during all this time fever was still lingering among the hidden recesses of the economy? It is certainly a most latent type of fever! I must be excused, therefore, for denying the existence of a fever imperceptable to the evidence of my senses - which the pulse does not reveal -
I hope, if any one should read this, he will have the charity to give me credit for the truth, when I say, that I write what I think to be correct - it has always been my maxim, if I write at all, to write the naked convictions of my mind -
Intermittent fever is composed of paroxysms - and these are divided by authors into several stages - some make four as the Forming, Cold, Hot and Sweating stages - others divide them into three: the Cold, the Hot & Sweating, while two only are described by some - the Cold, and the Hot stage - the second, I believe, is the most correct division, and the one which I shall adopt -

The cold stage is characterised by a pale and shrivelled skin, assuming a bluish or lived tint about the lips & extremities of the fingers - The surface is remarkably deficient of sensibility, & often of an icy coldness - the extremities are almost always cold - the whole body is diminished in size - Tumors on the surface lose their vascularity - the lustre & brilliancy of the eye is gone, it is dull, heavy and watery - indeed the character of the whole countenance is altered - tongue dry and hard - sometimes moist - pulse small, quick & irregular, or laboring hard & oppressed - the urine is generally pale & copious - always transparent if there should be sediment, it is deposited on the sides & bottom of the vessel, & never suspended in the liquid -

With regard to the sensations of the patient, the paroxysm is ushered in with a general sense of uneasiness - there is, for the most part, aching in the joints - a dull, wrenching pain in the back and loins -

Head-ache is seldom absent, amounting sometimes to a feeling merely of fulness and uneasiness, which may be a quick, darting, and exquisitely violent pain — The patient now feels indisposed to any kind of exertion — indeed, he is incapable of exercise physical or intellectual — he is restless, and petulent, or at least he loses his wonted cheerfulness & spirit — his thirst is constant & not for "warm drinks", but for "cold water" His teeth begin to chatter, and, by degrees, the rigors pervade his whole system — there is a universal & painful sense of coldness, which neither fire nor heaps of bed-clothes can relieve — not unfrequently there is a slight degree of coma or delirium — towards the termination of this period, vomiting occurs very often — indeed this often takes place in the commencement of the chill — I had almost forgotten to mention the hurried, quick and painful breathing — the precordial uneasiness & often, short, dry cough which are seldom

absent - Then, if not all, are the most common symptoms - such as are observed in the ordinary cases of Intermittent fever of Maryland -

The Cold Stage merges gradually, and almost imperceptably, into the stage of reaction, or Hot Stage - I should remark, that the duration of the Chill is extremely variable, lasting from half an hour to twenty four hours - The first approach of the second stage, is witnessed in slight flushings of heat, which, becoming more frequent and permanent, the sensations of warmth and chilliness prevail so equally that the patient is unable to say whether he feels warm or cold - indeed, he frequently complains of both at the same time - If there was vomiting during the Chill, it still continues, and does not generally subside until this stage is completely established - The Countenance, from being pale and shrunken, becomes flushed and full - the skin is now hot and dry -

The pulse, gradually increasing in volume, becomes strong, frequent, & bounding - the thirst is intense - the sensorial powers are markedly increased - the eye being exquisitely and painfully sensible to light - the patient is disturbed by the slightest noise, which increases the headache more distressing now than it was in the ~~bounding~~ stage - the sense of oppression & stricture across the chest still continue - this symptom, with hiccup, I noticed to occur invariably at the beginning of the fever, in our patient - the respiration becomes more easy yet it is frequently quick, & attended with uneasiness in the precordial region, & with pain in the side - The secretions are scanty - the urine being voided in small quantities, & highly colored, often tinged with bile - The mucous and tongue are dry - the perspiratory function, to all appearance, suppressed - The carotids and large arteries may be felt pulsating strongly - indeed all the vessels of the surface are distended with an increased

supply of blood — the perceptions of the mind became quicker and more vivid — ideas chase one another in rapid succession — the scenes and recollections of childhood start up in all the freshness of the occurrences of yesterday — there is generally more or less delirium. With children this is more common in ordinary cases than with grown people — After continuing for a longer or shorter time, according to the nature of the chill, & the character of the disease, this stage ends in the third or sweating stage — This is indicated by the appearance of perspiration, at first about the mouth & nose — then seen on the forehead, in the axilla and groins, and gradually covering the whole body — a "tingling sensation" is described in books as preceding the appearance of perspiration; but I never felt it — This effort of nature to free herself from disease is soon followed by symptoms of amendment —

the recuperative energies of nature are first witnessed in the nervous and circulatory systems — the central functions once more resume their equable and natural action — the pain in the head departs — a general sense of improvement is experienced. The pulse, though still continuing full and large, is perceptably diminished in tension & frequency — it becomes slow, regular, and compressible — The respiratory system participates in this general amendment — the breathing is no longer oppressed & hurried, but is slow, easy, and natural — the precordial uneasiness subsides — the secretions are relieved from their embarrassment — the urine is now secreted copiously, the characteristic "brick-dust sediment" is precipitated on the sides & bottom of the vessel — every thing shows that the storm is past — the current of nature flows, once more, quietly along its accustomed channels, — and the patient, worn out by the strife of the angry elements of disease, sinks into a calm & quiet sleep — The patient gets up after a while with no fever and

and no head-ache - he has a good appetite, & goes about the performance of his duties, & enjoys, to all appearance, a perfect freedom from disease, until, perhaps, the next day, when the same series of phenomena recur again at the same hour - As the disease is more or less complicated & simple, will the period between the paroxysm be one of remission merely, or of complete intermission. In a large proportion of cases, there still remains some visible indications of disease. Ague-patients are, for the most part, characterised by a pale, sallow complexion - indisposition to exercise - Children are often observed to avoid their usual amusements, and lose their characteristic cheerfulness & gaiety - The constitutional proclivity to the disease is naturally strengthened by its continuance - every additional paroxysm renders the access of the next more certain - Hence the obvious necessity of avoiding exposure to its exciting causes - such as the vicissitudes of heat and cold - improper

articles of diet - mental inquietude, and every thing, in fine, calculated to excite or depress the nervous energy -

But I am perhaps anticipating this portion of my subject - I have endeavored to give a general outline of the symptoms most usually characterising the several stages of this disease, as observed among us - I know that the sketch is imperfect, but I preferred to notice only such as had fallen under my own observation, or such as occur to my mind while I write - I might transfer to my pages pages from the best authorities on the subject, but I am not particularly fond of transcribing & I must be content to send forth the unscrutinized offspring of my own humble wits -

The paroxysms of intermittent fever return after variable intervals - They have been divided into Quotidians, Tertians & Quartans, a return of the paroxysm on every fourth day constituting the type called Quintan. This is not an uncommon variety in

same country — There is, however, no dif-
-ference in the nature of these varieties —
Their pathology, and, consequently their
treatment, is essentially the same —
Tertian is, I believe, the most common
form of intermittent in this country —
This variety is more easily cured than
the Quotidian or Quartan — the last is
often extremely difficult to get rid of —
Why this should be, I cannot say: it seems
to owe its continuance, in part, to the
power of habit — I remember an old
gentleman in our country, who, accor-
-ding to his own word, had not been free
from the "third-day ague & fever for "thirty
years" Dr Stokes relates an instance of
a patient who labored under this variety
of ague for a period of not less than
twenty years — The Quotidian is con-
-sidered to be the most inflammatory
variety, & predominates in the Spring
and Winter; while the Tertian & Quartan
occur more frequently towards the

close of summer, and in the fall of the year — It is chiefly in these varieties that we most frequently observe the biliary and gastric complications. A continuance of the stage of depression and imperfect development of the phenomena characterising the second or hot stage, are always to be looked upon as unfavorable, & indicate congestion — I might add, before leaving this part of the subject, that the paroxysms frequently run into one another — changing their type from a Quotidian to a Tertian; or from a Quartan, perhaps, to a Tertian. When the disease assumes this restless changing character, it not unfrequently ends in continued fever. A more peculiar variety, is that in which there are two paroxysms in the same day — this is called "double Quotidian" — a still more singular type of this disease is described by writers — "There is an

"attack every day, altho' the coincidence between the nature of the paroxysm and the period of invasion is only observed every second day, just as if there two Tertians, each attacking on alternate days." Thus, there seems to be two fevers, distinct in the nature & character of their paroxysm, attacking on alternate days — I must confess the rationale, by which this is construed into "double Tertian", is a little too deep for me — our Professor of Practice, with, his clearer vision, can see in it only "Quotidian" I shall consider this, therefore, merely a variety of Quotidian, differing in the intensity of its paroxysm, and period of attack, on alternate days — it seems to me easier to conceive of such a variety of Quotidian than to make it a Tertian —

There are the minutiae & more common variations of type — I shall say nothing of the almost endless varieties of the Irregular Intermittent

of mitis - they all belong to one family, though, it must be confessed, that the family likeness is not very striking - The same grand principle of treatment, with modifications according to the nature of the case, is common to them all -
Before entering on the subject of prognosis, I may remark, that Intermittent, Remittent or Bilious, and Yellow Fever, are but different degrees of the same disease - The prognosis in Intermittent being favorable or otherwise as it approaches in its nature to the other varieties - When Intermittent is about running into the continued form, the period between the paroxysms is lessened, the fits succeeding each other more rapidly -
A Quartan, for instance, becomes first a Tertian, then a Quotidian & finally, perhaps, a double Quotidian, so that at last there cannot be discerned any intermission between the attacks and the fever is continued -

When, therefore, the paroxysm anticipates its accustomed hour of attack - there is danger of its assuming a remittent form - the prognosis is unfavorable When the Chill comes on later & later, however, we have reason to suppose that it is of the purely Intermittent type - and we may generally prognosticate favorably - I have now, as well as I was able, sketched the symptoms characterising Intermittent fever in its several stages - I have noticed the most common of its types - and shown how it changes from one into another & than forms - I shall now endeavor to notice the phenomena that take place during these several stages - I shall go no further into their detail, however, than they are connected with a correct pathology of the disease, and lead to a safe and rational practice -

The first glance at a patient in the Cold Stage, detects an appearance intimately connected with its pathology - the pale, bloodless condition of the surface points unmistakably to the grand characteristic feature in this disease, - internal congestion - the balance of the circulation is disturbed - the due and healthy relation between the nervous and vascular systems is lost - There is congestion of all the great internal blood-vessels, and, consequently, the important viscera are oppressed with an unusual and abnormal quantity of blood. How is this proposition proved? by the evidence of our senses - by the dictates of common reason - various symptoms present strong evidence of the pack - certain signs under it still more probable, and the knife of the anatomist settles the question - The paleness and icy coldness of the surface, tells you at once that the blood is not there - but it has not escaped from the system - it must be some where -

What says the tenderness of the abdomen? impaired digestion - loss of appetite - nausea - vomiting - suppressed secretion - are these symptoms of no account? do they tell nothing? - what is the language expressed in the hurried and difficult respiration - the precordial uneasiness - the quick, irregular, and oppressed pulse? is it not congestion? what say the distended & bounding carotids - the sense of fulness in the head - the disturbance in the cerebral functions - indistinct or impaired vision - what do all these tell us of? congestion! and not congestion of one or two organs - but congestion of all the vessels important or unimportant - The stomach, on account of its more extensive sympathies, is perhaps the most frequently a sufferer from internal congestion - next the lungs, and under certain circumstances the brain is seldom exempt -

It will be seen at a glance how this fact of congestion being present much

influence our views in regard alike to the prognosis pathology, and Treatment - Respecting the prognosis - I have already observed, that the nearer the approach to a simple uncomplicated form, the more immediately is the disease under the control of our remedies - the presence of Congestion always indicates danger - Every time that an organ is abnormally Congested, its vital energy is impaired - it is less able to resist the encroachments of disease - the longer, therefore, an Intermittent, as I observed, has Continued, the more inveterate & the more difficult will be its Cure - not Congestion succeeding Congestion in a gradually weakened organ, finally giving rise to inflammation - once inflammation is fairly intrenched in the system, it reacts on the fever - here we have a new and important source of evil, capable in itself of producing the most fatal Consequences - But, it may be asked, if this Congestion, on which I have laid so much

stress, is the cause of death? I answer that it frequently is - In proof of this, I need merely refer to the various writers on the Intermittent fevers of Tropical Countries. The fevers of hot Countries are characterised by violent & fatal organic lesions - Inflammation of meninges of the brain - of the Liver, of the mucous lining of the Stomach and intestines - the Spleen too is almost always found diseased - indurated and enlarged - indeed every one of the viscera are more or less diseased - and lesions are frequently observed capable in themselves of producing death - I must remark here, that men have laid too much stress on the congestion of particular organs - Some have had Eyes for congested & "Lock'ed" livers alone - Some have had such restricted notions of its pathology, as to suppose Congestion confined principally to the most unimportant of the organs - the spleen; while others, have had their heads full of Congested brains - others again, rich in belly-knowledge forsooth, have made the mucous membrane of the Stomach the

"fons et origo malorum" — Now it is true, that particular organs may occasionally be more prone than others to take on inflammatory action — but it is not true that congestion is therefore partial — it is universal, and the lesions of particular organs is owing to peculiar weakness or predisposition of certain organs to disease. But a distinction must be drawn between congestion & inflammation — there is no difference in the pathology of the intermittent fevers in the temperate parts of our country, and in the intense & fatal fevers of the Pontine Marshes of Italy or the "fens of Lincolnshire" — in these, violent or fatal lesions are seldom absent; while in the intermittents of the temperate region of our own country, the most common sequelæ are more or less functional derangement of the liver — slight enlargement or congestion of the Spleen — sallow, unhealthy appearance of the skin — loss of appetite, or impaired digestion; and dropsical effusions — this swelling of the extremities and abdomen

is a consequence that I have observed, almost invariably, to follow an attack of Intermittent fever – indeed, I remember an instance of young lady, who, on recovering from an intermittent found that she had "outgrown" her dresses considerably – She was much alarmed & had serious apprehensions that she had been "tricked" –
I must also observe that there is generally great muscular debility and indisposition for either exercise or amusement – the heart palpitates on the slightest exertion. and we seldom fail to detect a general cachexic condition of the whole system –

I shall now pass on to the treatment; and here I will quote a remark of our esteemed Professor of Practice – "There have been more mistreated in this disease "and Syphilis (which every one supposes "he can cure) than in any disease in "the whole range of nosology" –
Some have thought that Intermittents could not be cured – others affirm that

it will cure itself - It would be a waste of time to recapitulate the various remedies that have been recommended in the treatment of this disease - Ignorant of its pathology, & unable to account for its phenomena, it was thought to be owing to some supernatural agency, and consequently charms, incantations, & spells were often resorted to - and, I may add, often with success - Armstrong relates several cases where individuals were cured by the supposed power of Magic - Such power, indeed, does the imagination exert over the physical constitution, that we cannot doubt the fact - The influence of sudden mental emotions in preventing the paroxysms of ague, is, I believe, a matter of common observation - I knew an instance of a young man being permanently cured of a quartan ague, under which he had labored for two or three years, by being tumbled suddenly over the side of a Canoe - it was cold

weather in Autumn - and the young man ran home as fast as he could; when he got a chill, changed his clothes and never had a chill afterwards - I consider his case owing to the fright, as he confessed that he was "so bad scared" that he "forgot it was his chill-day" - there may be some, however, who would rather attribute it to the beneficial and tonic effects of the "cold-bath" - I may say that every tonic of any consequence in the list, has been tried in the treatment of Intermittent fever - the diffusible stimulants, too, have had their day - and each of these various remedies has had its share of opposition & support, of abuse & encomium - now specifics have been recommended, I suspect, in this disease than in Dyspepsia, Gout or Rheumatism - but the reign of blind empiricism is at an end - a new light has been shed on the pathology of Intermittent fever - an intelligent regulate his treatment according to the symptoms, he

he says 200 regard to a name – this is the "Ignis Fatuus" of Medicine, which has led so many, not the ignorant & unlettered alone, but men of learning and science, into vulgar, and fatal errors! –

After perusing with attention the best modern authors on this subject, and after listening to a series of lectures from men, rich alike in the treasures of science, and in practical information I feel that I understand the great principles of treatment if I may not be able to express my views with clearness & precision –

The treatment of Intermittent fever may be divided into palliative and preventive or curative – the first regards the paroxysms and is varied according the indications presented in the several "stages" –

In the first or cold stage, it is extremely simple – friction to the surface – warm applications – as bottles of hot water to the extremities – hot bricks – warm flannels – anything in fine, calculated to solicit a return of

blood to the surface - thus relieving, at the same time, important organs suffering from congestion, and restoring warmth & sensibility to the surface - Warm and bland drinks may be allowed - altho' I do not see why Cold drink should be refused - nature seems to point to them in the incessant & constant thirst for "Cold water". It seems to me that they are not incompatable with the pathological views I have endeavored to explain - Stimulants should be used sparingly - they increase the violence of the reaction, and, indeed, afford little relief in this stage - With regard to the administration of Opium, there is much contrariety of opinion - It is recommended, however, by respectable authority, and I feel little hesitation in saying that it may frequently be given without risk & with decided advantage - On the authority of Dr. Stokes, I was induced to try this practice, last Summer, and as I thought with favorable result. 5 grains of Dover's Powder given just before the expected paroxysm to a child between 6 & 7 years old, mitigated the violence of all the symptoms of the chill, which

was followed, in a little time, by a slight febrile reaction — the whole fit was soon terminated by a copious diaphoresis. There was no return of the chill on the following day — I should not have alluded to my experience — trifling, however, as it may be, it has some weight with me, and much, in conjunction with the authority alluded to, be my apology for hazarding an opinion — Ammonia, it has been said, may be given with advantage in the cold stage — our Professor of Materia Medica, Dr Chew, says he has seen it afford considerable relief in this stage, without increasing the reaction in the next or hot stage — upon the authority of Dr Chew, I should have no hesitation in trying it. I shall say nothing of the practice of compressing the extremities with the Tourniquet — it is mentioned in terms of commendation by creditable writers — with regard to Bloodletting, I need hardly say, that since the writings of Dr McIntosh have been given to the public, it has found many and able advocates — It is undoubtedly a most valuable therapeutical agent.

In cases complicated with extensive visceral lesions blood-letting is our most efficient resort - nothing, indeed, can be more natural than the idea of abstracting blood when we have evidence that an organ essential to health & life is in danger from congestion - I do not believe that the lancet will be demanded in a great proportion of the intermittents of our country. Considering the greater proclivity to visceral inflammation & consequent danger of fatal organic lesions in hot countries, we can easily appreciate the zeal and enthusiasm with which Blood letting has been recommended - Dr McIntosh I do not believe overrated the value of "bleeding in the "Cold Stage" - But I must again remark that the fatal organic lesions characterising the fevers in which he bled, are seldom witnessed in ours - The sub-acute or chronic inflammation & functional derangement of viscera are the effects of long continuance or frequent repetition of the disease, rather than of

of the intensity of the paroxysm or violence of Congestion — but such I have observed are the the usual sequelæ of the Intermittents occurring in the temperate regions of our Country.
If I am asked why I believe bleeding unnecessary under such circumstances — I answer that I have seen its Cures without — I was born in an "Ague Country" — I have grown up in the midst of ague & fever and, indeed have had it myself often & over again, & yet I am unscathed the prick of a lancet is not on me — I must not be understood as denying its occasional utility even then Circumstances — If the imperfect state of intermission or other symptoms should lead us to suspect the existence of internal local inflammations blood-letting may be had recourse to with advantage — In this view then, and bearing in mind the fact that local lesions exist in a great many cases I look upon Blood-letting as a valuable and often only available resource —
In the Second Stage the treatment is also

simple - The indications are to mitigate by all the usual means to violence of reaction. The first place the same caution in regard to internal lesions must be observed as was enjoined in the preceding stage -
The patient if possible should be allowed a clean & well ventilated apartment - he should be unincumbered with useless covering - if the skin is hot and dry sponging it with cold water will afford much relief -
He may be allowed a plentiful use of cold water - Ice, when it can be obtained, is however preferable - even cold water is often injurious, when, occupying so much less surface is retained and affords the greatest relief to this irritable & suffering organ - Antiminials - effervescing mixtures and acidulated drinks of various kinds have been recommended; but I do not know that they are ever of much advantage, and frequently do harm -
If the Lancet was demanded in the Chill, it is also in this stage often our chief and

and sometimes only resort — the magazine is filled with combustibles and the torch is only wanting to produce the explosion — Now is the time when there is the greatest danger of lesions and the prompt & free use of the lancet is our only means of safety — but it must not be inferred because this is the period of most immediate danger that we should neglect so powerful an agent until the danger arrives — "An ounce of prevention is better than a pound of Cure"

Respecting the treatment of what is termed the Sweating Stage — it consists pretty much in letting nature alone — The perspiration succeeding the fever is an effort of nature to rid herself of disease; and proceeds generally very well without our interferance. We may promote its action by giving bland drinks, & guarding the patient from the effects of exposure — but we must beware not to "overstep the modesty of nature" — by officiously piling on bed-clothes, and shutting up all the doors to "keep out the

cool or damp air" Nature is baulked in her efforts - the perspiration is prolonged, and the patient unnecessarily weakened -
This concludes the treatment usually employed in the paroxysms -
Our curative means are given during the the period of intermission or remission
As I had occasion to mention before, there have been a variety of remedies recommended in this disease - but I must be pardoned for saying little about them - they have had their share of the world's consideration -
Dr Stokes says, "if there is anything in Medicine which deserves the name of specific, it is bark in ague" - If the disease is simple in its character - if there are no evidences of local irritations - the period between the paroxysms being free of complete apyrexia - the paroxysms returning at their accustomed hour - and, what is more important, presenting a sameness in the intensity & duration of their several stages - if the case is one of simple essential intermittent fever, I firmly believe

that Quinine is as certainly a specific as Mercury in Syphilis — This opinion, I know, is in opposition to much high authority, but it is also supported by able men — and what is better than great names or beautiful theories, it is sanctioned by the results of experience — I have seen it cure the disease, and I must hope that I am presumptious if I give credit to the testimony of my senses — Dr McIntosh doubts "whether Bark has not been more injurious than beneficial" — Why? "he has so frequently seen it do mischief" — but this is an objection drawn confessedly from its abuse. Now how often has not Mercury been abused in Syphilis? and yet, I think, there are those whose faith in its power is still unshaken! — There are those who would think it unscientific to question the utility of Mercury in Syphilis, because there are multiplied instances of its abuse — Bark, like all remedies for which great virtues have been ascribed, has had its share of extravagant eulogy and unjust opposition — employed as it was

before the pathology of the disease was understood, it was necessarily much & often abused. But the veil of obscurity and doubt, that hung around Intermittent fever, has been lifted - the eye of science has penetrated the darkness - physicians now prescribe it only when it is indicated - but, as I have already said, when the disease assumes a simple, uncomplicated character, it is indicated, & its employment is invariably attended, with the happiest results -

The first thing then, in a case of Intermittent fever, is to examine its nature & character - are the paroxysms mild? is the disease simple? or is there evidence of local inflammations? if so, have they supervened in the course of the disease - or are we to trace the cause of the disease to their existence? These are inquiries that we should always make before we can form any rational plan of treatment - But, though there should be evidence of local irritations, does it follow that Quinine is always

impropriety by no means - if they are of a chronic character, and the paroxysms are violent and dangerous, the latter should be the objects of our immediate concern. They are, for the most part, more quickly amenable to our remedies - a dose of Quinine frequently puts an immediate stop to the paroxysm; and then we have the local affections to contend with alone - Chronic diseases require chronic treatment - should the local diseases, however, from their intensity & violence cause us to apprehend immediate danger, they must then be treated with the utmost energy and promptness - I think, now, or rather hope that I have explained myself with regard to the circumstances under which Quinine may be given with propriety - I speak of Quinine, because I consider this the best, dangerous, and at the same time most effectual form in which this remedy can be given. The claim of the Sulphate of Quinine to preference over the Bark in substance,

has been questioned, but its superiority is now, I believe, pretty generally admitted - with respect to its dose & administration, there is still some discrepancy of opinion; but this is of little consequence - Some prefer giving it in small doses, at short intervals, during the whole period of intermission - others give one large dose immediately before the expected paroxysm - Perhaps either mode may have its advantages under certain circumstances - Two doses of five grains each, taken at an interval of two hours, the last immediately before the time of the expected chill, has several times succeeded in arresting the disease in my own person - One dose of sixty grains, taken just before the chill, had the same good effect in several instances which fell under my observation last summer - I should not hesitate to give ten grains in a single dose immediately before the expected attack - It may be given with

advantage in pills or in solution, with a few drops of sulphuric acid - It must be remembered however, that it is indeed somewhat more liable to irritate in the form of Sulphate - I need not say that Quinine is given in much larger doses than I have mentioned - every one is familiar with the enormous quantities in which it is administered by the Italian physicians, and in other Countries where Intermittent prevails with violence. Indeed, it is given in our Southern States in very large quantities - 15. 20. & frequently 30 grains have been given at a single dose - It is said by a late writer, that its beneficial effects are to be measured by the "Tinnitus aurium" it is said to produce. Next to Quinine, as an antiperiodic in this disease, writers generally place Arsenic; but, if there is sometimes danger in giving Quinine, the administration of Arsenic must be doubly doubtful -

It is not for me, in my ignorance and inexperience, to question its merits; but I will maintain caution in regard to its demerits — I look upon it as a dangerous remedy, & shall be unwilling to make use of it. There are other remedies less dangerous, & perhaps equally good — The bounteous & inexhaustible laboratory of Nature, our woods, affords us a variety of powerful & harmless therapeutical agents — Among the most valuable of our indigenous medicines, are the Cornus Florida and the Salix Alba — It is thought even now, that all the powers of Quinine exist in our Dogwood & Willow!! We only want the means of procuring their active principle in a sufficiently pure & concentrated state — The Per-ferro-cyanate of Iron or Prussian Blue has been much used of late in Intermittents — and it is said to be a remedy of not much value —

I must observe, that Quinine is not dependent solely on its power as a tonic for its

for its beneficial effects in the treatment of this disease - Quinine is called the Prince of Tonics, but, like most Princes, has its peculiarities - though possessing power a tonic it is certain that it has properties peculiar to itself - Our Prof. of Mat. Medica, in his instructive & able Lectures on this substance, attributes to it an "ante-periodic" property - that such is the fact, & that its chief value, as he observed, in Intermittents is owing to this property, I think there ought to be little doubt - It is a known fact that it may be given with safety & advantage when any other article of this class would be decidedly inadmissible - Dr Chew attributes the same property, in a degree, to Arsenic -

It frequently happens, that this disease resists the treatment I have mentioned. Mercury is often one of our most effectual remedial agents - as a general rule, regarding its administration, I think I may say; that when the Lancet is

is indicated, Mercury will generally be of service — More or less functional derangement of the Liver & other viscera generally supervenes in the Cause of this disease under such circumstances Calomel is our Chief Means —
It equalizes the circulation, restores the the Liver by its peculiar action, to the discharge of its proper functional duties, and exerts a kindly & beneficial influence on the mucous lining of the Stomach and alimentary Canal — thus paving the way for the effectual operation of the Quinine — In the intermittent fever occurring in the fall of the year, it is generally advisable to precede the use of Quinine by a dose or two of Calomel. Some recommend it to be given for two or three days before the Quinine is commenced with — or it is given in alternation with the Quinine, in the form of Blue-Mass — Whenever the Quinine fails, Mercury should be had recourse

recourse to — I should not forget to mention, that the Quinine is usually premised by a cathartic — this is a general rule with some physicians, and whether it may be always necessary or not, it is at least a harmless and often very salutary precaution —

I must now bring my subject to a close: it has already been prolonged to an unnecessary and tiresome length — I have found it much more difficult to handle than I had anticipated, and the constant demands of my various studies have forced me to hurry through it without paying that regard and attention which I could have wished, and which its importance demanded —

The few remarks which I shall offer concerning the Cause, should have come in another place — in point of importance, however, I think they are not out of order —

The Malaria from Marshes has been long considered as the Cause of Intermittent Fever, and Circumstances seem to favor the

the opinion - for I must remark, that it is by no means an established fact - On the Contrary, the influence of Malaria in the Causation of disease has been denied by many, and its existence question. Dr Stokes, in Confirmation of his views on on this Subject, refers to the writings of Sir G. Baker and Sir Gilbert Blane, in which several instances are related "when no Ague was found to exist in marshy districts, while in hot and dry situations, it was endemic" On the other hand, it is a matter of general observation, that all water Courses & their vicinity are Characterised by a greater or less prevalence of intermittent fever; while in the high & dry situations of forests the Ague is Comparatively unknown - Dr. Potter relates to us a remarkable instance of a family who every other year had the ague; enjoying in the intervening years good health - a field between the house and a Mill-Pond

was cultivated alternately in wheat and Corn - "In year in which the field was tended in wheat there was Ague, when it was in Corn there was none" - Now what could this Coincidence have been owing to?
An instance somewhat similar to this came under my own observation - A gentleman in our Country had a piece of Pine-woods, lying between his residence and a Creek, cut down - this was in the winter, and, in the ensuing Spring and Summer, nearly every member of his family had either the "ague & fever" or "Bilious fever" - as he had previously enjoyed good health, and as the Country round was not unusually sickly, he was naturally led to attribute the cause of the sickness to the Malaria from the marsh below -
He suffered the Pine to spring up again, it is now thicker than it ever was, and his family are now enjoying their former health - "The fact is, that the "Coincidence" between the existence of marsh Malaria

is notorious — Respecting the nature of this principle, and its modus operandi, words have been bandied among the learned to little purpose — That the atmosphere in the vicinity of marshes & water courses contains some principle predisposing to this disease, experience and reason forbid us to doubt — Our incompetence to detect its existence, or to demonstrate its mode of action, only shows the imperfection of art and the inscrutability of Nature —

An Inaugural Dissertation on Digitalis purpurea

Submitted to the Examination of the Provost Regents and Faculty of Physic of the University of Maryland For the Degree of Doctor of Medicine by

James O. Larsh of Baltimore County Maryland

1st Feb 1842

Dedicated to Nath. Potter
Professor of Theory and Practice
of the University of Maryland

It being my duty together with my fellow-students to write an inaugural dissertation, I know no one more suitable to dedicate it, than to my venerable preceptor; under whose direction and counsel I have pursued my studies, and whose pleasure it has been to instruct and inculcate into me and my fellow-students, the true principles, science and application of medicine. After having several times reviewed the Materia Medica, I have selected Digitalis purpurea as the article of my dissertation.

The task being to me both novel and difficult, and conscious of my own inability to do justice to the subject, I hope that my Dissertation will not be viewed too closely by the eye of scrutiny, and that my faults though many, be overlooked or excused. Thanking you for the kindness and instruction I have received from you; I hope for the future prosperity and happiness may be yours.

Wishing that you, who are the last remaining of the first founders of the Institution, may long yet be blest, with health and talent, to assist in supporting and upholding the University of Maryland.

Your humble pupil
James C. Larsh

Introduction

It becoming us as physicians, to relieve the sufferings of humanity, it is not only necessary for us to know, what article to employ but also its therapeutical application and its operation on the system; so that we may be master of our remedies, and enabled to relieve and not aggravate the many diseases which afflict mankind. And we should also select from the numerous classes of medicines, those Articles which will effect the most speedy, and certain cure.

The article I have adopted, (Digitalis purpurea) is is classed as a Narcotic and Diuretic, and having given a summary account of the growth and beauty of the plant, together with the mode of preparing and preserving it for use, I have then given its therapeutical application in different diseases. And if in the following Dissertation, I have indulged too much in the mode of classification, I hope that the Reader will excuse the

Author

Digitalis purpurea

This is an article of the Materia Medica, which belongs to the vegetable kingdom.

Fuschius was the first author, who noticed its medical properties from the German Fingerhut — a finger stole; and who also gave it the name of Digitalis, from digitus, on account of its flowers resembling the finger of a glove. Though this plant had been previously described by Tragus, under the name of Campanula sylvestris.

Digitalis purpurea.

Gen. Ch. Calyx five parted. Corolla bell shaped, five-cleft, ventricose. Capsule ovate, two-celled. Digitalis. Sex. Syst. Didynamia Angeiospermia — Nat. Ord. Scrophularineae. Willdn.

Fox-Glove is a beautiful plant, with a biennial or perennial, fibrous root, which sends forth large tufted leaves, and a single, erect, downy and leafy stem, rising from two to five feet in height, and terminating in an elegant spike of purple flowers. The lower leaves are ovate, pointed, about eight inches in length, and three in breadth, and stand

upon short, winged foot-stalks; the upper are alternate, sparse and lanceolate; both are obtusely serrated at their edges, and have wrinkled, velvety surfaces, of which the upper is of a fine green colour, the under paler and more downy. The flowers are numerous, and attached to the upper part of the stem by short peduncles, in such a manner as generally to hang down upon one side. At the base of each peduncle is a floral leaf, which is sessile, ovate and pointed. The calyx is divided into five segments, of which the uppermost is narrower than the others. The corolla is monopetalous, bell form, swelling on the lower side, irregularly divided at the margin into short obtuse lobes, and in shape and size bearing some resemblance to the end of the finger of a glove, a circumstance which has suggested most of the names by which the plant has been designated by different languages. The mouth of the corolla is guarded by long, soft hairs. Its general colour is bright purple; but sometimes the flowers are whitish. The internal surface is sprinkled with

black spots upon a white ground. The filaments are white, curved and surmounted by large yellow anthers. The style which is simple, supports a bifid stigma. The seeds are very small, numerous, of a dark colour, and contained in a pyramidal, two-celled capsule.

This plant is cultivated in this country, for its beauty, and for its medicinal virtue; it abounds in the mountainous forests of Switzerland, and in most of the temperate countries of Europe; grows wild in woods and heaths, only in gravelly soil, and flowers in June, July and August; the leaves are bitter and nauseous to the taste, they yield their virtue both to water and Alcohol.

The United States, Edinburg and Dublin pharmacopoeia's direct the leaves, but the London recognises the seeds, as well as the leaves also officinal. Great care is requisite in selecting, preparing and preserving this plant to insure its activity. The leaves should be gathered in the second year, immediately before or during

inflorescence, and those only should be chosen which are full grown and perfectly fresh. It is said by Duncan that those plants are preferable which grow spontaneously in elevated places, exposed to the sun. As the leaf-stalk and midrib are comparatively inactive, they are generally rejected. The leaves should be dried either in the sun-shine or by a gentle heat before the fire; and care should be taken to keep them seperate while drying.

The Digitalis which we make use of in this country, is obtained from the Shakers of New York in oblong masses, we sometimes find it a little musty, owing to its being compressed, I suppose, before perfectly dried. The leaves imported from England is preferred. This medicine we often find varying in its strength, which may happen from the leaves being of the first years growth or exposure to the Atmosphere and Light or not being carefuly selected and prepared. The powdered leaves should be preserved in dark, fragne bottles, and kept from the action of light as well as of air and moisture; a damp

atmosphere has a very injurious operation in carrying off those poisonous effluvia with which its efficacy seems so intimately connected.

Properties

The leaves of Digitalis when green possess no odour, but when ~~dried~~ dried has a faint narcotic odour and a bitter nauseous taste. The colour of the dried leaf is of a dull pale green modified by the whitish down upon the under surface; that of the powder is of a fine deep green. They yield their virtue both to water and to alcohol. The dried leaves analyzed by Rein and Haase were found to contain in 100 parts 5.5 of a green resin, soft, viscid, soluble in alcohol, ether and the volatile oils, and possessing the properties of a mixture of resin and fixed oil; 15.0 of gum mixed with a salt of potassa; 2.0 of superoxalate of potassa; 52.0 of lignin; 5.5 water with 5.0 lost. Other researches have varied but little from the above analysis. Digitalis has not, what was once supposed the active principle, Digitalin.

Preparations

This valuable article is used in the following forms.

Tincture of Digitalis according to the formula, of of the London and United States pharmacopoeia.

"Take of the dried leaves of fox-glove four ounces; diluted alcohol two pints. Macerate for fourteen days, and filter through paper.

The Edinburg College orders an ounce of the dried leaves, and eight ounces (by weight) of diluted alcohol, and digest for a week.

The Dublin College directs two ounces of the dried leaves, (the larger ones being rejected,) in coarse powder, and a pint of proof spirit; and macerate for a week

The dose of the tincture is ten drops two or three times a day, and increased cautiously if necessary.

Infusions

Take of Fox-glove (dried leaves) a drachm; boiling water half a pint; tincture of Cinnamon a fluid-ounce. Macerate the fox-glove for four hours with the water, in a covered vessel, and strain, then add the tincture of Cinnamon. — U. S.

The London and Dublin processes correspond with the above, except that half a fluid-

ounce of the spirit of Cinnamon is employed instead of a fluid-ounce of the Tincture.

The Edinburg takes a drachm of the leaves, eight ounces of boiling water, and an ounce of the spirit of Cinnamon; and having macerated the leaves in the water for four hours, adds the spirit and strains.

The dose of the Infusum Digitalis, is half a fluid ounce repeated twice a day under ordinary circumstances, and every eight hours in urgent cases, until the system is effected. The faint odour, and nauseous bitter taste of the Fox-glove, are covered by the spirit of Cinnamon in these infusions, which are clear and of a brownish yellow colour. These infusions do not differ materially from those of Withering, Who was the first that ever fully investigated the properties of this plant.

Decoctum Digitalis

Take of digitalis (dried leaves) a drachm, Water as much as will afford of strained eight fluid-ounces. Place the vessel over a gentle fire and as soon as the liquid boils remove it, then

digest for a quarter of an hour, and strain. This decoction is almost inodorous, and has a bitter nauseous taste. It is but seldom used in that form.

Cataplasma Digitalis

According to Eberle is made thus.— Fol. digit. sicc. ℥ ii. (or fol. digit. recent. ℥ iv.) Aqua ℔ ii. boiled to half strain and with the decoction and linseed meal make a poultice.

Analysis of the watery infusion as given by Eclectic. It has a pale olive-green colour, with the unpleasant odour and taste of the plant. This infusion does not precipitate solutions of galls, tartarized antimony, nor sulphate of Iron, which only deepens its colour; (but according to the London dispensatory it affords precipitates with the sulphate of iron, acetate of lead, and infusion of Peruvian bark,) it produces a yellow precipitate with muriate of Mercury, and a blackish violet very copious one with the muriate of Silver. The dry powder which should have a beautiful green colour, and moistened and triturated with Lime or calcined Magnesia, and a glass rod dipped in muriatic acid held over it, exhibits copious white fumes,

proving the presence of ammonia.

The presence of ammonia is also apparent in the Tincture, which is rendered milky by water. Ten grains of the powder macerated with f ℥ss of Sulphuric ether, lost three grains its weight, and yielded its colour to the Ether; and the ethereal tincture on being evaporated on water left a pellicle of dark green, unctuous, resinous matter, whilst some yellow extractive, was dissolved in the water, and precipitated afterwards by oxymuriatic acid.

From this analysis Digitalis appears to contain Ammonia, extractive matter and a pea-green resin-ous matter, in which it has been supposed by some, its narcotic power resides.

This Article now is seldom used internally in any other form than the powdered leaves half a grain or tincture ten drops three times a day and may be increased until its effects are perceptible

Digitalis purpurea when taken in an ex-cessive dose, produces heaviness of the joints, indistinctness of vision, nausea, syncope, trem-bling, vertigo, pain in the forehead and in

the bottom of the orbits, drowsiness, slow and tremulous pulse, vomiting and occasionally diarrhoea, with pain in the bowels, cold sweats, coma, convulsions and apoplectic death. It will also produce an inability to retain the urine. Small and frequently repeated doses, occasions a distressing nausea, attended with anxiety and depression of spirits, debility, vertigo, false vision, great diminution of the frequency and force of the pulse, reducing it sometimes slower than forty strokes in a minute; together with languor of both body and mind.

Its narcotic effects are by no means transient, but on the contrary are apt to continue long, and also to reappear after having subsided. So it should never be continued for a long time.

A difference of opinion has been entertained whether this medicine is a stimulant in its primary operation. Dr Fern Paris and Eberle say, that it is a direct sedative; though I believe that it is now generally believed to be, stimulating in its primary operation.

In administering this remedy it should always be borne in mind, that it sometimes lies dormant in

the system for many days manifesting no power; and then dysplay itself in accumulated power, bringing on the most alarming prostration

This is the most powerful agent of the materia medica by which we can guide the action of the heart at pleasure. Dr Baldon states, that having got his own system under the sedative influence of Digitalis, the pulse was not lessened of above one hundred in a minute; when he sat down it beat considerably slower; and when lying on his back it fell as low as forty. He has tried this upon himself (he says) several times, and also upon others and never found it to vary. But the same disordered pulse can be produced by debility from repeated bleeding

Digitalis is a diuretic as well as a narcotic. This medicine creates a dryness of the fauces, and heat in the alimentary canal with a suppression of the secretion. It acts on the secretory vessels of the kidneys, and is supposed to promote absorption. It sometimes produces purging, and has been known to produce ptyalism.

From the effect of its diminishing the force and frequency of the heart and arteries, it is given in a variety of diseases where this effect is desirable. And when

venesection possesses no adequate power over the circulation as on that account it was given in phthysis.

When an over dose of this medicine is taken, as a poison, the first thing administered to the patient should be an emetic, to throw the poison from the stomach; and then stimulants such as Brandy, Ammonia and Opium; and perhaps an infusion of Nut-galls or green tea, and after that a purgative to carry off what remains in the stomach or intestines, if any.

Dr Perrier praises the Digitalis combined small doses of Opium in Asthma, and its success is confirmed by Dr Percival; Dr Pugnie of Cork found that it mitigated the violent symptoms and improved the general health; he gave it in fiveteen drops of the tincture three times a day. And in some kinds of Asthma no one will doubt its efficacy; but that which is hereditary, cannot be cured by it. Dr Gregory says in his work on practice, that he has seen the Fowler's solution, in doses of ten drops three times a day, combined with the same quantity of the tincture of Digitalis, remove in the most decided manner, paroxysms of Asthma, which had resisted all the other remedies.

This article also was at one time used in venereal

ulcerations, Chronic Rheumatism, Hooping cough and some spasmodic affections. And Hufeland recommended it in the form of fomentation, for dispelling glandular swelling.

As a diuretic the use of Digitalis was first introduced by Dr Withering in the year 1775; he was induced to try it, from finding it the chief ingredient in a family recipe for the cure of dropsy, regarding which his opinion was asked; he found that its beneficial effects in dropsy, were more certainly obtained in those constitutions in which there is a laxity of fibre, pale countenance, febrile intermitting pulse and cold skin; and where the swelling easily pits. But in florid habits with great strength, tense fibre and a hot skin, its sedative effects are perceived, but no diuresis follows. If the belly in ascites be hard and circumscribed, or the limbs in anasarca be solid and resisting, we have but little hope of its action. Experience has confirmed these judicious observations; and it is found that where this favorable state does not exist, it may be produced by bleeding, and the free use of neutral salts, calomel and squills, all of which reduce the system. The diuretic effect is checked when much nausea is present; and

Dr Wilkins says purging will also effect it.

The kinds of dropsy in which the effects of Digitalis is most useful are Ascites, Anasarca, Hydrothorax and that species of dropsy which succeeds parturition, where the legs and thighs swell, become pale semi-transparent, with pain in both groins.

It has been found of great service combined with Nitrous Acid, in the dropsy which occurs in broken down constitutions, that have long been harassed by Mercury.

Digitalis will not cure dropsy attended with palsy, unsound viscera or other complications of disease; but by allaying the urgency of the symptoms, it gains time for other medicine to act.

This medicine from its action on the heart and arteries and its power of promoting absorption in particular forms of dropsy, makes it a valuable addition to our Materia Medica

In low inflamatory diseases of the chest, combined with effusion, Digitalis is very useful. In these cases the powers of Life should be supported by tonics, while Digitalis is administered in large doses, to excite the absorbent vessels. And it is particularly useful in those diseases in which

there is fear of their terminating in serous effusion.

It was given by Darwin, Powell and Drake to stop the secretion of the Bronchia. Burns gave it in abortion, with an excited action of the heart and arteries, after bleeding; and in diseases of mania complicated with high excitement.

Poere gave it in Hydrocephalus to an infant, in the dose of twenty drops of the Tincture, and cured the child.

Dr Ferriar recommended it in spasmodic Asthma, combined with opium, in which he says) he has succeeded.

It has several times been used with success in Epilepsy, occurring in scrofulous constitutions.

It is also valuable in Aneurisms Hypertrophy of the heart and Palpitation, the excitement being first subdued by the Lancet.

In low cases of Pneumonia Biliosa where after repeated bleeding, the pulse remains obstinate and attended with great debility, Digitalis combined with Calomel and squills are very beneficial

In the frequent recurrence of Hydrothorax, succeeding to violent Pneumonia, with great debility, venesection cannot be performed; and if exhaustion of excitement can be performed, without the direct abstraction of that fluid, a due quantity of which is absolutely necessary to preserve the vital principle; the method by which such reduction be procured, must unquestionably possess a decided superiority. Digitalis in a very considerable degree, supplies this requisition.

Dr Currie praises this remedy very highly in inflamations, where the lancet could no longer be used. he says "I have employed this remedy to a very considerable extent in inflamations of the brain of the heart and of the Lungs, and have succeeded with it in situations where I have otherwise despaired. The fox-glove besides diminishing the celerity of the pulse, operates as a very powerfull diuretic, and it is well known that a free discharge of urine, has often

great influence in releiving the heart. This is shown by the benefit obtained by different diuretics in chronic catarrh, and in this way Digitalis may be usefull in catarrhal Phthysis; and a diminution of the celerity of the pulse may somewhat alleviate the hectic symptoms.

This medicine by some of the ancient Authors has been highly praised in pulmonary consumption. Dr Bedloes said that Digitalis purpurea was as perfect a specific for Phthisis pulmonalis as Peruvian bark is for Intermitting fever.

In some persons predisposed to Phthisis, the mucous membrane of the Lungs previously observed to possess in some instances, a more than ordinary sensibility; and this peculiarity is displayed in what is termed the irritable species of Scrofula, to distinguish it from the indolent or

phlegmatic kind. In this case the injury occasioned to the pulmonary organs from the generality of cough medicines is more serious and extensive. The agency of Foxglove as a preventative of consumption so often generated from this cause, has been thought by some authors as perhaps worthy of attention.

Dr Currie praises it very highly in those where this fatal disease is hereditary, the use of Digitalis (he says) as a prophylactic will save many a life that would have otherwise been cut short; and he further adds that in those irritative coughs of young persons, which when violent denote at least a tendency to tubercular deposition, a timely administration of Digitalis will in a great measure, supersede the employment of other medicinal agents, and thus destroy the germ of Phthysical growth. But I think we can select other articles of the Materia Medica

which will act with equal efficacy, and less danger in the administration, and on that account should be preferred.

But this medicine by the older authors has been too highly praised. As for consumption when it has once formed like all other remedies fail, and in the last stage can act only as a palliative, to soothe the downward path to the tomb.

Dr Gregory in his valuable work on practice, recommends Digitalis in the advanced stage of Measles attended with great debility and where the pulse remains frequent, to confine the patient to a mild diet and direct a saline draught with a few drops of the tincture of Digitalis, to be taken every six hours.

This is a remedy whose virtues by ancient authors, have been no doubt, praised too

highly, but it still is a valuable article in Medicine. But where there is inflamatory action going on with an increased action of the heart and arteries, unless there is fear of debility the Lancet should always be preferred.

In spitting of blood from the Lungs, (Haemoptysis) in some cases where bleeding is necessary on account of inflamation, which is known from the state of the pulse and other accompanying symptoms, after bleeding and the inflamation still remains Digitalis is very often valuable in lessening the irritation. Dr Eberle in his work on Practice says.- When Haemoptysis assumes a chronic character, with an irritated state of the pulse, Digitalis does much good. He directs, from 1/4 to 1/2 gr of the powdered leaves, or from fifteen to twenty drops of the tincture, may be taken every four hours, until a manifest impression is made on the pulse. and it will be proper to continue it for ten or twelve days.

The Cataplasma Digitalis has been used to advantage in scrofulous ulcers, but it is now superseded by other more valuable applications and in consequence, has now fallen pretty generally if not entirely into disuse.

This medicine is valuable also in Aneurisms, particularly of the thoracic Aorta, which is accompanied with pain in the tumour, shooting through the chest, and as the disease advances the breathing becomes more or less affected; I know of no Article which in this disease is more calculated to act as a palliative, than Digitalis together with a strict regimen and diet, and preceeded by bleeding generally or locally, or both, according to the nature and demands of the case.

This being a remedy both powerful and dangerous, it should be administered in small doses and increased gradually;

but should never be continued long on account of it liability to lurk in the system. The patient while using it should be watched strictly, and also confined to a horizontal posture on account of the weakened action of the heart, caused by this drug, not being able to propel the blood in sufficient quantities to the brain is apt to cause fainting.

An
Inaugural Dissertation
on the
Yellow Fever
Submitted to
the Examiners of the
Grand, Royal and Priority of Hiram
of the
Maryland Lodge
for the
Degree of Master of Masons
by
Illus Bro Bishop
of the
Lodge of Hiram
on
Friday of January
February 1866

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Provost, Regents and Faculty of Physic
of the
University of Maryland
For the
Degree of Doctor of Medicine
by
Alexis O'Guidry.
of the
Parish of St Landry.
and
State of Louisiana
February 1842.

To

Dr. W. Potter, Professor of the Practice of Medicine in the University of Maryland.

Sir

It is with no small degree of satisfaction that I take this opportunity of dedicating to you, my thesis, as a feeble acknowledgement, of my gratitude for the many acts of kindness I have received from you in the course of the two years of my pupilage under you; and it will be doubly gratifying to me if with all its imperfections, it proves no less acceptable to you.

I am

my dear Sir

your faithful & obliged young friend

Alex O'Brien.

Yellow Fever.

This disease has been called by Dr. Rush a bilious remitting yellow fever, with I think much propriety. It bears a close resemblance to an intermittent, and this it was that led the learned Dr Cullen to identify these two diseases; and in his discription of intermittents, we observe that he also embraces remittents of which he gives no separate definition.

Remittent fever is seen in countries where marsh miasmata is eliminated, and when the disease is attended with a yellow skin it takes the name of yellow fever. In its severest forms, the viscera of the three great cavities are implicated from the beginning of the disease, and there is I think no disease in which the appearances on post mortem examinations may be so truly predicted.

Before I proceed any farther, it is just that I should crave the indulgence of my learned Professors, for it cannot be expected that one so inexperienced will do justice to a subject upon which so much has been written, and with the exception of Dr Rush

with little or no benefit whatever to medical science.

The disease in some cases has been seen to begin with violent excitement, without previous rigour, but this is a rare occurrence, for the rigour is generally the first symptom, and it comes on in a very severe form.

There are sometimes, previous to the occurrence of the disease symptoms of indigestion, a feeling of load on the stomach, constipation of the bowels, a feeling of debility and fainting, and bad nights, sometimes the patient dies as soon as an hour after the attack, before reaction has taken place: but this is not a frequent occurrence and I think this may be attributed to the overwhelming determination of blood to the head — Dr Potter has seen cases where persons were suddenly taken with the black vomit, and die in the course of a few hours; and it is thought by some that the black vomit is always a very unfavorable symptom. Dr Rush thinks that a vomiting of bile in the first stage of the disease to be a rather favorable symptom.

There are many varieties, of each of which it would be idle for me to give a description. I shall only enumerate all the symptoms of the most frequent form of the disease, which are as follows

a rigour more or less severe succeeded by a sudden reaction with a determination of blood to the head; a hot skin, a redness of the eyes, a burning sensation in the pit of the stomach, pain in the small of the back -

The expression of the countenance will generally lead an experienced practitioner to have a correct idea of the severity of the disease. The patient throws himself from one side of the bed to another and is exceedingly restless from anguish - There is much tenderness in the left side, an unquenchable desire for cold drinks, and with great retching of every thing taken into the stomach. There is often an inability of the stomach to retain any thing taken in, even the blandest fluids are often rejected in this stage of the disease. The fluid which is thrown up is sometimes mixed with bile, and sometimes there is also in some patients a discharge of flatus -

The pulse is generally full, tense, quick and chordid, and will often be found to intermit after the fourth or fifth stroke; but in many cases, especially in the most severe form of the disease, the pulse is preternaturally slow. and this slowness -

of the pulse (says Dr. Rush is occasioned by the stimulus of the remote cause acting with too much force upon the arteries to admit of their being excited into quick and convulsive motions. The respiration is hurried and often attended by a cough, the tongue is in the first instance moist and of a white colour, but as the disease advances it takes on a red colour, and smooth shining appearance.

A quick respiration, a flushing of the face a heaviness of the eyes, pain in the small of the back, nausea, a great restlessness and delirium, a full and tense pulse, &c. say many practitioners, symptoms of the most formidable form of the disease; but I do not believe that it is half as dangerous as that form which is attended by insensibility, coma, a slowness of the pulse, and a coldness of the extremities, for these are symptoms which denote great congestion of the brain, lungs and liver, and of course less under the control of medicines,

The first stage of the disease often terminates by remissions, when the patient and friends entertain the fond hope of certain recovery;

but they are soon deceived by the recurrence of the symptoms in an aggravated form. In the second stage, too, there are sometimes remissions, and hope of recovery is again entertained; but although the pains and uneasiness subside, the pulse sinks, the countenance becomes shrunk, the eyes glazy, and the whole features assume a dreadful appearance.

With the approach of death comes on a coldness of the extremities, and a troublesome hiccup, which sometimes may have existed throughout the whole of the second stage of the disease.

Hemorrage takes place from all parts of the body; the abdomen is tense and the patient either dies slowly or suddenly. I think that this is most apt to occur in those cases where proper evacuations have not been used to a sufficient extent.

There, of course, must be various symptoms exhibited in each form of the disease. Sometimes the functions of the brain are undisturbed to the conclusion of the last scene, and at others when there is extensive disease in the brain, delirium takes place; the patient exhibits great many varieties of nervous symptoms, such as convulsions,

tremors, rigidity of the limbs and picking of the bed clothes.

When the brain is slightly affected, the patient may be said to be comatose; he is easily roused when spoken to, and his countenance has the appearance of that of a drunken man.

When the lungs are affected, the breathing is altered from that of health; dyspnoea may exist without any severe structural lesion of the organ; a cough may exist with or without pain.

It is said that the functions of the kidneys are most always disordered, and upon dissection the bladder has been found to be contracted as in Cholera Maligna; and unless the secretions of these organs are restored, death will almost always ensue.

There are many other symptoms which might be mentioned, but I shall content myself with those that I have already given, and with a few remarks upon that symptom which has given the disease the name of Yellow fever, and upon the black vomit.

I think it would be much better for

physicians of the term yellow was abolished from the title of this fever, for it is not only often absent in many cases of the disease, but frequently occurs in the mildest bilious remittents; This symptom is produced by a mixture of bile with the blood, I think that this is the cause of it in cases when the colour is very deep and lasts some weeks after the fever has been subdued; but in those cases when it is transitory, or local, or appears only during the paroxisms of the fever, I think it is owing to a peculiar action in the blood vessels; or perhaps it is owing to a rupture of the extreme blood vessels-

In contusions of the skin, a similar colour sometimes takes place in which case no suspicion has ever been entertained of an absorption or a mixture of bile with the blood-

The black vomit is sometimes a secretion of the intestines, but much more frequently it is produced by a partial hæmorrage which takes place in the small vessels of the stomach; the veins not being able to return the blood to the heart, they are ruptured and the-

blood becomes mixed with the gastric juice, It is thought by some to be produced by the liver, and I dare say that this is the case when the matter thrown up, sometimes in the first stage, happens to be of a yellowish colour; but on the contrary when in the advanced stage of the disease the matter vomited is of the colour of Coffee grounds, it is a vitiated secretion of the stomach itself.

The causes which have been said to produce the yellow fever have been more than it would be reasonable for any one to imagine; Some have asserted that there was a peculiar state of the atmosphere which produced the disease. the learned Dr Rush thought that there was something in the atmosphere combined with marsh effluvium which produced the disease, others again, have made heat alone the cause of the disease, but unless the patient's system is affected by marsh measma, heat will not of itself produce the disease; that it is an exciting cause of the disease no doubt is entertained.

The circumstances which has led writers-

on medicine to believe that heat alone could produce the disease, is the fact of a ship leaving a port when there was no yellow fever and the crew contracting the disease after sailing twenty or thirty days. for this has often occurred; but those gentlemen were not aware of the putrefaction which constantly takes place in the timbers of which ships are built.

In New Orleans the disease has to my knowledge been produced by this cause, when it could not be attributed to marsh miasmata for the marshes were observed to be overflowed; and the disease originating on board the ships amongst the sailors.

It has been satisfactorily proven that when the marshes in yellow fever countries were covered by a foot and more of water during months when there was most heat, that these countries were exempt from the disease; and this is I believe a strong argument to prove that heat cannot be considered as a predisposing cause of the yellow fever.

In Philadelphia putrid coffee has produced

it, and I have seen it arise from the same cause in Opelousas, La; when many of its most valuable inhabitants lost their lives.

All vegetables when putrefied will produce the disease, but marsh miasma is the most prolific in producing the disease, especially in warm latitudes, owing I presume to the very great quantity of malaria which is emanated from the marshes.

The stimulus of miasma will often, when not in excess, lie dormant in the system, and of course will be incapable to produce the disease without the cooperation of other causes; which are heat, especially of the sun, exposure to night air, intemperance in drinking and eating; sudden fear, great exercise of the body and mind, grief from an extinction of hopes by the death of a friend will frequently excite the disease, and it is sometimes produced by a change in the state of the mind directly opposite to that which has been last mentioned.

Many persons who attend patients-

that recover, are seized a day or two after they are relieved of their toils and anxiety of nursing.

The collapse of the mind from the abstraction of stimulus of hope and desire, by their ample gratification, probably causes that debility of the system which favours the miasmata in producing the disease.

I come now to speak of the appearances on dissection. They vary according to the duration and severity of the disease, the organs chiefly affected and the stage in which the patient dies

When patients have been much depleted, of course we cannot expect to find as much vascularity in their bodies as in those who have lost no blood. We should always keep the above circumstances in view when we are employed in the investigation of morbid appearances.

Pleuritic effusions are sometimes seen; the lungs themselves, in some cases, show various marks of inflammation, and the bronchial tubes are also extensively diseased; In the abdomen as in the thorax, various lesions are occasionally observed, The liver is pulpy, soft, yellow and

sometimes may be easily broken down. The spleen has often been found in a similar state; but the stomach and bowels are the greatest sufferers in this disease; when cut open they are found to contain more or less of the dark matter which is thrown up during life, and the mucous membrane is greatly vascular, of a deep red colour and over a great extent of surface.

The substance of the brain seldom exhibits strong marks of disease. The veins of the dura and pia mater are tingid with blood; there is effusion sometimes under the dura mater and there is always a great proportion of it seen in the ventricles, especially when the patient has died in convulsions. The gall bladder is often found distended with bile the colour of tar. The urinary bladder has sometimes been found greatly contracted, and to contain no urine; at other times small quantities were found in it.

Treatment.

There have been as many revolutions in the treatment of the fevers of warm climates.

as in that of any other class of diseases. Those who have supported the doctrine of putridity have avoided bleeding even in the first stage, and when they, too, admit of the existence of inflammation, for fear of debility which they always expect in the latter stages, they begin by clearing out the primæ viæ, and then have recourse to bark in large doses without any regard to the state of the stomach, local inflammation, or any other circumstances - they prescribe opium, for the purpose of keeping the bark upon the stomach and give wine and brandy with the view of supporting the strength and keeping off the state of collapse; but I think it may be said with great truth, that it is by this treatment that ninety nine cases out of a hundred of their patients are sent into eternity - and those, says Dr Potter, that do recover under such treatment, have to thank their strong constitutions rather than their physicians -

In desperate diseases says Dr Rush -

desperate remedies must be had recourse to.

Blood letting is almost always, if not always to be used, at least in the first stage of the disease. The quantity of blood taken should be large or small at a time according to the state of the system. In cases when the pulse acts with much force and fredum from ten to twenty ounces are to be taken at once; but when the pulse is weak and depressed a few ounces only should be taken at a time and repeated according to circumstances.

When patients object to be bled frequently and we wish to produce a sudden impression upon the system, we should bleed them in the erect position or if impracticable, in the sitting posture, In this way we will render the frequent use of the lancet less necessary, and give relief more effectually and in a much shorter time.

Calomel and Jalap should keep pace with the lancet, 10 grs of the former to 15 of the latter may be given at a dose and repeated every two or three hours until copious evacuations are produced and the faces take on a dark colour, I should have mentioned that generally the

passages emit no smell before the calomel has commenced its effects, and when by proper purging they become very fœtid, it indicates that the secretions of the liver are restored.

The Jalap is given merely with the view of rendering the Calomel more speedy in its operation for jalap alone has often failed, even to produce a passage of any kind. Many others remedies have been had recourse to in this disease but all without success.

The best drinks during the administration of Calomel, are cold water, lemonade, sugar-and-potatoes, and molasses and water which may be given plentifully.

It sometimes happens, that on account of our not being able to see the patient before the disease has run into an advanced stage attended with a depressed pulse and much prostration of the system, we cannot use general blood letting. In such cases we have to make use of local bleeding, such as cupping and leeching, and rubbing with mercurial Ointment has been found very beneficial.

I had the pleasure of seeing a friend recover under a similar treatment — his Physician had not bled him or if he had, it was so sparingly that the disease went on in an aggravated form, and on the second or third day, the friends getting alarmed sent for another Physician, and it was resolved by them, that as blood could not be drawn on account, I presume, of the great prostration of strength and the pulse being with much difficulty felt, he should be well rubbed with mercurial ointment especially were blisters had been applied; and under this treatment he made a rapid recovery.

No stimulant of any kind should be given the patient as long as there is any inflammatory action existing, he should be kept quiet, and none but those absolutely necessary should be admitted into the room; and the prescriptions should always be written.

No gossiping old women should be allowed to interfere in any way, for they will always give some cordial which they say they have seen given to this and that one with much —

benefit, but which in reality have sent many to the grave, who would otherwise have recovered.

The vomiting which occurs sometimes on the fourth or fifth day with a burning sensation in the stomach will generally be relieved by small draughts of milk and water, or equal parts of sweet oil, milk and molasses, taken in small doses. They effect this by diluting or blunting the acrimonious matter effused or rather originated in the stomach.

Removal from the infected atmosphere, when practicable is of great service. Some practitioners have ascribed the benefit derived from a change of air to the exercise patients generally undergo under such circumstances; but I think it much more laudable to ascribe it to the healthy atmosphere mitigating the disease, for it is well known, that exercise is rather injurious to those labouring under a fever.

It is said that on board of ships, bleeding cannot be used to any great extent, the reason seems to be very obvious, I believe it is owing to the disease being milder on-

sea than on shore, its mildness in this case is no doubt produced by the water counteracting the stimulus of the miasmata —

I have found this subject much more difficult to handle than I expected; and I can hardly hope that this paper is free from many errors, — both in regard to style and arrangement, but I hope it will be remembered that it is my first attempt —

An

Inaugural Dissertation

On

Diaphoretics,

Submitted to

the Examination of the

Provost, Regents and Faculty of Physic,

of the

University of Maryland,

for the

Degree of Doctor of Medicine,

by

James McEldery Mullikin,

of the

County of Prince George

and

State of

Maryland.

February 20th

1842.

Diaphoretics

No class of medicines in the materia medica appears to deserve our attention more than that of Diaphoretics. We see them daily demanded in the treatment of almost every variety of disease, and generally observe the most happy results, attending their proper administration.

The intimate sympathetic connection existing between the skin and internal organs shows us at the first glance how easy it is for any disturbance in the one to bring an disorder and disease in the other. The function of the skin being more or less deranged in all febrile diseases, we generally find torpor of this function in many instances to be the first step towards febrile action; as is plainly exemplified in those fevers which are known to arise from atmospheric vicissitudes. We can easily conceive then how any interruption to the healthy performance of this function may become an additional source of

febrile irritation when that portion of the circulatory fluid which nature has designed to be thrown out of the system in the form of perspiration, is retained and acts as an irritant to the heart and other important organs, thereby distraying the equilibrium of the circulation, and throwing the whole system into a more or less deranged condition. The importance then of attending particularly to the condition of the cutaneous surface is evident from the susceptibility internal organs possess of taking an diseased action when this function has been in any way interrupted.

Diaphoretics then are those medicines that increase the cutaneous transpiration. They are termed Sudorifics when they excite this discharge so copiously, as to produce sweat: the operation of both being similar, but differing only in degree.

It is quite immaterial which of the two terms we use, though that of diaphoretics

is generally employed in Classifications of the materia Medica

This class of medicines may be divided into Antiphlogistic and Stimulating Diaphoretics. The first division comprising those remedial agents that tend to reduce the action of the heart and arteries; such as the preparations of Antimony, Ipecacuanha, Nitras Potassa, Salina Mixtures &c. together with blood letting, which after all appears to be one of the best means we have of exciting diaphoresis under certain conditions of the system. The second division includes those remedies that increase action, such as, Serpentaria, Gum Guaiacum, Camphor, Opium &c. Besides the variety of remedial agents used internally for the purpose of exciting diaphoresis, we have several modes of exciting the function of the skin by means of external applications; such as the warm or vapour bath, Cold applications to the surface of the body during high fevers; also frictions &c.

Diaphoretics seem to act by inviting the circulation to the surface of the body, hence increasing the activity of the cutaneous vessels. Those of the stimulating class may be said to act in this manner, but on the contrary those of the class that tend to lessen action by their general debilitating influence upon the system, may be said to act by causing a state of relaxation in these vessels. When obstructed perspiration is attended with a hurried state of the circulation, the kind of diaphoretic we could expect to derive most benefit from would be any one of the class, whose action has a tendency to reduce the force and frequency of the circulation; consequently our choice would be from the antiphlogistic variety. But on the other hand, when this obstruction is attended with a languid state of the circulation, pale cold skin &c. our selection would be from the stimulating variety.

Some articles belonging to this class of medicines appear to exert something more than a mere diaphoretic effect upon the skin, — Some of them for instance possess a direct and specific influence upon the capillaries of the skin, as is clearly demonstrated from the power they possess of removing some of the most obstinate cutaneous eruptions; Antimony, Sulphur and some others are said to possess this property.

We find diaphoretics to be particularly beneficial in the treatment of affections of the internal organs. When the circulation has been thrown from its balance, and retreating to these organs, becomes a source of irritation; it is then that this class of medicines may be found to be of much importance, by diverting the course of the circulation and causing it to flow to the external part of the body, to the great relief of all the internal organs; Consequently they deserve

much attention in the treatment of all febrile diseases. Exposure to a cold and moist atmosphere is one of the most frequent causes for which, we have to call into use our remedial agents of the diaphoretic class. The cold atmosphere operating upon the cutaneous vessels, causes the circulation to retreat from them to the internal parts of the body in an undue quantity; consequently producing inflammation, congestion &c. It is therefore in this manner that the deleterious portion of the circulatory fluid, instead of being thrown off, by the cutaneous Emunctories, is brought into contact with these important organs, becomes a source of general irritation, bringing on derangement of the whole system, and necessarily producing reaction or the stage of febrile excitement

The great variety of diseases in which this class of medicines may be found useful; is too numerous-

for me to pretend to enter into a detail of each. I shall merely mention a few, and speak of the manner in which they are supposed to be benefited. I do not mean to be understood that medicines of the diaphoretic class are alone capable of curing almost every variety of disease, but that in conjunction with medicines, belonging to other classes of the materia medica of equal importance with the one under consideration, they may be said to be of primary importance, especially when the perspiratory apparatus has been at fault

In the treatment of Remittent and Continued fevers, diaphoresis acts in a very salutary manner, by relieving that dry and hot state of the skin, which always accompanies them. The action of the heart and arteries being generally of a high grade, he must have recourse to cooling applications, and to the relaxing diaphoretics; such as Nitre, Antimony &c.

though generally these fevers require more active remedies, in the commencement than diaphoretics; such as strong purgatives and depletions otherwise.

In some forms of Typhus fever, in order to establish a sufficient degree of action upon the Skin and Sub-Cutaneous vessels; nothing appears to have a more beneficial effect than the use of such external means as tend to excite the action of the Cutaneous vessels. They assist in conjunction with remedies exhibited internally in bringing about an equilibrium of the circulation and in this manner relieve the congested state of the vessels of the internal organs.

Care should be taken not to excite copious sweating in the latter stages of this disease, as the debilitating influence of this discharge might be too great for the exhausted strength of the patient to bear.

In inflammatory affections of the Lungs this class of medicines form a very useful part of the treatment. In conjunction with

more active depletary remedies, as blood letting, they are almost the sole treatment necessary in affections of these organs.

"It is upon the diaphoretic effect, that persons in the incipient stages of Phthisis Pulmonalis are directed to wear flannel next to the skin and reside in temperate climates. The flannel and mild temperature of the atmosphere operating by keeping up a regular action of the cutaneous emunctories" We often observe the bad effects arising from exposure to cold in this disease. The function of the skin being checked, causes the circulation to retreat to the lungs, producing cough and other bad symptoms attending this disease. Pointing out to us the necessity of paying particular attention to the condition of the cutaneous surface in endeavouring to relieve to it.

Our common Catarrhs, so little thought off by most persons; which if suffered to run their course without treatment -

often lead to very serious and incongurable diseases; may in many instances be entirely relieved by early and copious diaphoresis, and thereby those dreadful after consequences, or apt to follow neglected colds are prevented.

I have often experienced in my own person, the greatest relief, when suffering from a slight cold, from the early use of some diaphoretic remedies, together with a little aperient medicine, and avoiding exposure, which is invariably the exciting cause.

In the treatment of affections of the bowels, diaphoretics have been highly recommended, particularly in that distressing complaint called Dysentery. This disease consisting of an inflamed and congested state of the vessels of the intestinal canal, more especially the lower portion, the Liver being also affected in the majority of cases.

We can readily conceive how diapho-

-resis may prove beneficial in this condition of things, knowing as we do the intimate relation existing between the internal and external parts of the body, and also that the action of diaphoretics is to invite the circulation to the surface, and hence in this manner divert the force of the blood from the seat of diseased action, and relieve the inflammatory condition of the intestines, both by their depletory and revulsive agency. Though generally this disease requires more active depletion than that afforded by diaphoresis alone; consequently we have to resort to the Lancet and Cathartics; and when the liver is implicated, as is almost invariably the case, our principal reliance is in the use of Mercury in combination with diaphoretics.

Gentle diaphoresis is also highly beneficial in the treatment of Cholera Infantum. More than a gentle action upon the skin would be injurious. The application of a flannel roller around the abdomen

in the chronic forms of this disease, diarrhœa and dysentery has been much thought of by some authors; By this simple application, says Dr. Chapman, I have done great good in these affections.

Diaphoretics are also much used in the cure of Rheumatism. Copious perspiration is seldom beneficial, but often injurious; gentle diaphoresis will afford us all the benefits to be derived from their use. Copious sweating renders the system more susceptible to the injurious influence of atmospheric vicissitudes

Having related a few diseases in which diaphoretics form a useful part of their treatment, I shall conclude these imperfect remarks, by stating the regulations necessary to be observed during their exhibition. The good effects of diaphoretic remedies are very often prevented from a want of due attention and care during their administration

Persons very often suffering from slight-

indispositions, of a Catarrhal nature, for instance, are put under the influence of diaphoretic remedies, and at the same time do not endeavour to avoid exposure in the least; the consequence is the remedy taken, often aggravates rather than alleviates the symptoms, and from a slight indisposition some acute and violent disease arises, which might have been avoided by a little care and prudence. It will be simply necessary to say, that the patient should be confined to bed, the temperature of his apartment should be kept at a medium point, and that he should avoid any sudden vicissitudes of temperature, or anything that could tend to check the discharge suddenly. Unless these rules be strictly observed diaphoretics will be found often to do more harm than good; for, the majority of cases in which we have to use them arises from the influence of atmospherical vicissitudes, and as long as we expose ourselves to its influence,

the cause is still operating. The necessity of avoiding exposure is evident, for while the system is under the influence of diaphoretic medicines, if we neglect this precaution, our remedies will act as diuretics instead of diaphoretics, and hence our object will not be attained.

An Inaugural Dissertation on Cynanche Trachealis

Submitted to the Examination of the Provost, Regents, and Faculty of Physic of the University of Maryland

For the Degree of Doctor of Medecine

by

William W. Stewart of Delaware

Feb. 15th 1842.

This unworthy production is dedicated to Nathaniel Potter M.D.; not with a view of any merits it possesses, but that the dedicator boasts of the name of a Potter, whose talents eclipses the most illustrious of his Profession, and May his professional course be a guiding star in My future career; and thus, by his worthy examples be relieved of some of the difficulties which a young Physician is apt to be immerged

A Pupil

Cynanche Trachealis.

There are but few affections in the whole cata=
logue of diseases in which a physician has to be
more on the alert, and stimulated to action thr=
=ough the impulse of a moment than this; know=
=ing as we do that its premonitory symptoms are
few in comparison to some diseases that we have
to contend with, and that they are developed
but a short time before its true nature is made
known to us in all its Malignity.
This disease says Gregory in his practice was
not described with any degree of clearness by
the ancients. The first regular history we have
of it is to be found in the letters of Martin Ghisi,
in 1749. Dr Home after this acquired great
reputation to himself for his account of it.

Mackintosh confirms the assertions
above by saying that it is scarcely a hundred
years since this disease was known.
Whether this latter author means to infer
that it did not exist prior to that period,
I cannot say; but I believe that every
disease that the human system is sus=

ceptible of at the present day was equally so from the beginning. Our lack of Pathological knowledge at a period when our science was as it was in its infancy is the only veil by which we can cover some of the assertions of the ancient authors.

By the term Cynanche Trachealis is understood to be an inflammation of the Mucous Membrane of the Trachea, and is of more frequent occurrence during childhood than at any other subsequent period of life, Cullen asserts that it seldom attacks children before they are weaned, and he continues by saying that after this period the younger they are the more susceptible they are to it. Now I cannot conceive any just grounds on which he bases such an assertion, nor do I find in his work any substantial evidence he adduces to substantiate such a theory. — I may add on the experience of the best men that it does occur while the child is at the breast, if it is exposed to the exciting cause, cold; and the views of many

authors on this subject will be found to this effect; and we find a note to Cullen's practice by Dr Caldwell, who says that it may be true that this disease is more incidental to children after they are weaned; yet it occurs very frequently at every period from three months to that of seven years. The more frequently a child has this disease the more they are predisposed to it, but the second attack is seldom so violent as that of the first: as age advances this susceptibility wears off, as is very conclusively demonstrated to us from the fact that it is so much more prevelent among children, than adults.

Many authors assert that adults are wholly exempt from the influence of it; but I may say that notwithstanding this disease is most frequent among children, yet it does occur at all ages; and it is but too true that it terminated the existence of one of the noblest men that our country ever produced; the renowned Washington; the esteemed father

of our country; and the themes of whose glorious achievements are familiarly known to every school boy. The reason that it occurs more frequently among children than adults, I cannot conceive; unless the mucous membrane of those more matured in years is more dense and not so susceptible to the vicissitudes of the weather.

The violence of this disease is sometimes so great that it will travel the whole of the respiratory organs, and inflammation of the lungs has been known to exist when the primary organ affected has been known to be the Trachea; and vice versa; inflammation has been known to have originated in the lungs and pleura, and travel up and produce croup. The muscles in most cases are also inflamed; and our most worthy professor of practice and for whose opinions I always maintain the greatest reverence; says that this sonorous cough which has been compared to the barking of a dog or fox, is caused by the

rigidity of the muscles; and also in such cases the voice is louder and more shrill, than in health; &c

There are many diseases in which it is of the most vital importance that we should be able to distinguish this disease from; and if our diagnosis should fail to be correct, would have a very embarrasing effect upon our patient: as for instance in Pneumonia, Bronchitis, Pleuritis &c. and in these cases we will find that emetics will have a very hazardous effect upon the life of our patient, while in croup it would be followed by the most desirable consequences.

It is not a very hard matter to distinguish this disease from a common Catarrh, as the latter disease is not so rapid in its progress, neither does it symptoms depict to us such a horrible character as croup does almost in its incipiency. The exciting cause of this disease is cold in combination with moisture; and also very sudden changes in the weather. When that condition of the weather that is the

most favourable to the production of it, exist, for any length of time we may have it raging in the form of an epidemic; and Dr Caldwell says "that like other diseases, prevails, at times, as an epidemic, without any apparent dependence on the sensible qualities of the atmosphere". As it regards the doctrine of contagion; I believe it to be wholly fallacious: and our Professor (T) says that it is no more so than pneumonia or rheumatism.

It usually commences like a catarrh, the symptoms being more or less severe, with some degree of fever, preceded by chilliness, the voice soon becomes hoarse; and as the disease procrastinates the fever increases, and in a short time the breathing becomes impeded, particularly during inspiration, at last the respirations becomes stridulous, and the voice shrill; a harsh dry cough exists from the beginning; and when there is any expectoration, it has more or less a muco-purulent appearance; sometimes small masses of lymph are discharged, which occasionally resembles portions of false Membrane.

As the disease advances the expression of the countenance becomes more anxious, the lips and cheeks have a swollen livid appearance, alternating perhaps with a deadly paleness. The pulse is frequent small and occasionally intermits. There is prostration of strength, and restlessness: although the surface of the body generally speaking is hot, the extremities are sometimes found cold. At last the body is covered with a cold clammy sweat, and the child dies of suffocation. The Fauces are sometimes found swollen and inflamed &c. Children are generally seized in the evening while in bed; and instances has frequently been known of their going to bed apparantly well; and before morning it has developed itself with symptoms of the severest character &c. for farther reference to this, I would refer you to Mackintosh's practice 283rd page. Perhaps it might be well enough for me to mention here that Armstrong says that "this difficulty of breathing is always found in affections of the respiratory organs, for in a healthy condition of these organs

there is not unnatural sound in the breath=ing or speaking". This difficulty of breathing is to be attributed to an increase in the thick=ness of the coats of these organs, together with a distention of the vessels that go to supply these parts; and it also is owing to a rigidity of the muscles. He also continues on the 76th page, vol 1st of his practice, "and says one more important fact with reference to breathing is the relation which the number of respirations bears to the number of pulsations of the heart in a given period. The average number of respirations in a healthy adult is about eigh=teen in a minute, and the average number of pulsations in the same time is seventy two; the relation being therefore as one is to four.

We often find in our dissections after the death of those who have fallen vic=tims to this disease, a Pseudo Membrane formed or a tube of coagulable lymph, and capable (says Dunglison) of organization: Now as it regards this part of my subject I am compelled to say that my knowledge is but

limited, and all that I do know was ac=
quired through the instruction of professor
Potter, and I cannot do him more justice
than by penning his views verbatim as
contained in Gregory's practice. He
says that it is a secretion from inflamed
vessels, and presents all the different
consistencies from the smallest change from
health to the secreting process perfectly
formed in inflammation; the condition
of the vessels seems to be incompatible with
secretion, and in many dissections we
find the vessels injected with red blood
only. The secretion of the more compact
form, to which the appellation Membrane
has been applied, seems to be the fibrin
of the blood semi-organised, such as we
see it, where adhesions are formed be=
tween membranous parts. This mem=
brane is found not only throughout the
bronchial bifurcations, but throughout
many of their extreme ramefications into
the smallest air cells. This fact was

beautifully demonstrated in the body of a child fifteen months old, which we prepared for the demonstration of professor Wistar in January 1795. If we macerate the membrane found in the trachea in water and thus seperate the internal softer parts from the more compact, we find it to consist of numerous rectangular fibrous lamillae completely identified with the fibrin of the blood, collected by stirring it while flowing from a vein with a rough body, the red globules being washed off. We have preserved and compared the substances and no Physiologist or Pathologist can discover the least difference: but fibrin and albumen are so nearly allied that it is almost impossible to say in what the difference consists. Perhaps the greater portion of alkali in the latter renders it more soluble in water, but we dare not credit the assertion that fibrine will not dissolve in the same fluid although it is with difficulty effected".

The subject of spasm in croup has been much cogitated by authors; and I can with much propriety pen the views of Mackintosh as con=
=tained in his practice on page 279; which runs
.. as follows. "A great deal too much has
.. been attributed to spasm in this disease.
.. Cullen, for instance, assigns more danger
.. to spasmodic action, than to exudation
.. of lymph. In the 327th paragraph, he says:
.. "The peculiar and troublesome circumstance
.. of the disease seems to consist in a spasm
.. of the muscles of the glottis, which, by in=
.. ducing a suffocation, prevents the common
.. consequences of inflammation": and again,
.. in the 329th, "When the disease ends fatally,
.. it is by a suffocation, seemingly, as we have
.. said, depending upon a spasm affecting
.. the glottis; but sometimes, probably, depend=
.. ing upon a quantity of matter filling the
.. bronchia", at the same time he (c) attributes
.. the febrile symptoms to a corresponding spasm
.. on the surface; in fact, he was fond of riding
.. his spasmodic hobby, and being unacquainted

" with pathological investigations, his great mind
" was frequently turned out of the proper path
" of inquiry.
" Spasm may certainly exist in this disease but
" there is sufficient reason to account for the
" symptoms without having recourse spasm
" as a cause. We have at first slight diffi=
" =culty of breathing, from the increased vascu=
" =larity and distension of the vessels of the
" mucous membrane producing swelling,
" and consequently some diminution in
" the calibre of the air tube; consequently from
" a greater or less degree of conjestion in the lungs;
" and lastly from the exudation. Death is
" sometimes produced by asphyxia early in
" the disease, by conjestion of the lungs, and
" by the inflammation being particularly severe
" at the rima of the glottis, occasioning such
" a degree of swelling as to prevent inspira=
" tion, and children often die during the act
" of crowing".

As it regards the treatment of this disease I will only say that its very nature speaks to us in languagee that is not to be passed unheeded, reminding us that we should be decisive and energetic in our action; knowing as we do that this is part of the respiratory apparatus, and that the least impediment in its functions will unfit it for the high and noble office which nature has assigned to it, and consequently if the disease is not attacked in its incipiency, death must perhaps be the result, and that at no distant period: And I can not conceive any greater pleasure that a physician can derive than to be able to restore a young child an emblem of innocence and beauty, (and at the same time being conscious that it was through his instrumentality) to the breast of a fond mother, on whom her affections are placed; but if it should be torn from her kind embrace and wrapped in the cold and friendless winding sheet of death, with it her affections are des=

=troyed, defying all the artifice of friends to divert her mind from this her most esteemed treas=ure, and an emblem of her first plighted love.

It is not my intention on this occa=sion to discuss the merits and demerits of different authors on this subject, as some appear to me to be very ridiculous at this day when our science has arrived at a greater degree of perfection, and practical experience has proved them to be errors of the grossest na=ture*. It is something very remarkable in examining these different authors; we find one that considers it an inflammatory dis=ease, another a spasmodic, and another a nervous; yet to show the great inconsistency of their theory and practice, they all resort to anti inflammatory treatment; and may credit be due to them as it very conclusively demonstrates that they have saved the lives of their fellow creatures, even to the viola=tion of their own theories.

There is no fact in Medecine that is

* Those who maintain the theory of a spasmodic or nervous disease in th

better predicated, than, that this disease is of an inflammatory nature; as such I consider it, and shall treat it accordingly — Gregory divides it into two stages; the first being that of inflammatory action, and the second being distinguished by the formation of that preternatural membrane that I have described above. The first and most natural indication of cure in this disease and indeed all diseases of this character, is the lancet; and it is in fact one of the most direct remedies that we can employ that will as directly and effectually reduce inflammatory action, and therefore should be used in all cases where debility does not indicate a reverse treatment. Besides the powerful tendency this remedy has to reduce the circulating system, and by that means mitigates inflammation; it possesses considerable virtues in promoting expectoration; from the fact that it takes away a part of this increased morbid circulation to the parts, and

consequently enables the vessels to assume a more healthy action. As it regards the quantity to be taken, I will add, is to be directed in proportion to the violence of the disease.

Emetics are highly extolled in the treatment of this disease, and they entirely merit the credit that is assigned them, when administered in their proper place, but should never be given befor bleeding is resorted to as is directed by some authors; as all emetics, when administered before this precaution is taken, have a tendency by their mechanical operation of aggravating the symptoms, and sending an increase quanity of blood to the brain; and from that fact would be injurious rather than beneficial: But if this necessary ~~precaution~~ precaution is taken as I have directed, I think they act beneficially in several ways; 1st by evacuating the stomach of its contents, and as a natural consequence renders it less irritable; and secondly, by removing all

morbid collections that may be present in the trachea; Thirdly, by determining to the skin; and fourthly, they are endowed with the power of moderating arterial action.

Dr Eberle says that in infants affected with this disease, emetics should be occasionally employed, for at this early age no voluntary efforts are made on the part of the child to dislodge and expel the viscid secretion from the Larynx, and which if not removed, may by itself cause suffocation. I have seen recommended Tartarized Antimony and Calomel in combination, in the proportion of 6 grs of Calomel to 1/4 of gr of Tartarized Antimony, to a child from 1 to 5 years old; And Dr Eberle says that the peculiar advantages which appear to belong to this practice are the protracted and great degree of nausea which the calomel produces, an effect which has a powerful antiphlogistic tendency; and the alvine evacuations which almost always speedily ensue.

Tartarized Antimony, Ipecacuanha, Sulphate of Zinc, Squills, Sulphate of Copper;

have all been used and recommended in this affection, and when the object is merely the expulsion of the mucus or pseudo membranous matter, any of these articles may answer this purpose. In some instances where the accumulation of the tenacious secretion is very rapid it becomes necessary to repeat the emetic three, four or five times in the course of Twenty-four hours.

Purgatives are also remedies of great repute in this disease, and among these, Calomel stands in the foremost ranks, and maintains an unsullied reputation, baffling all the curses that its most inveterate enemys can impose upon it. The utility of this remedy in this disease was first discovered and employed by the physicians of this country &c. — I can with much propriety and in accordance with my own views insert a note from Gregory's practice on page 394, by Prof. Potter. Viz.

"The plan of giving calomel in small but frequently repeated doses (as from 1 to

5 grs every two hours) was strongly recommended by Dr Hamilton of Edinburgh along with the warm bath heated to 96 degrees; He succeeded in every case if it was given before the lips became livid; gradually increasing the intervals of the dose of the medicine, as the symptoms grew better. He relied principally on this mode to the exclusion of bleeding, a practice which will, we think, find few advocates; Calomel is no doubt a valuable purgative and should be freely used in this disease, but other remedies must assist; as it runs its course rapidly, salivation must not be relied on as important to the cure.

It is usually prescribed in doses so insignificant that the practice is rather calculated to injure the reputation of the medicine than to cure the patient. Every physician who is most conversant with this disease, and has accurately weighed the merits of the various means employed, will admit, that if we were restricted to any single remedy he would accept Calomel. But there is no

occasion for relying on emetics, bleeding, or mercury alone. By a judicious combination of calomel and tartrite of antimony and potash, any case of croup, in its early stage, can be cured, (unless in its highest degree of inflammation, or when the muscles are the principle seat of the disease.) The quantity of this mixture cannot be well ascertained; but should always be given once in a quarter or half an hour, till the pulse shall have been nearly imperceptible. Calomel alone will generally succeed, but there are very few who will venture to give one or two hundred grains in a single night, which is often indispensible, and can scarcely fail to accomplish all we could desire. The apprehension of a severe ptyalism, deters many from employing this safe and incomparable remedy, although it is almost always groundless. We have never seen but one instance of salivation by calomel in croup, out of several hundred. In the torpid state of the stomach, it is beyond all other medicines effectual in accumulating the diminished excitability, which seems soon

to pervade the whole sentient system, In large doses it does not act frequently as a cathartic; but finally very copiously, and in cases of constipation an enema gives vent to the contents of the stomach and intestines, and almost always completes the cure".

The use of the corrosive muriate of Mercury in this disease, as an emetic, has been considered problematical by some and hazardous by others. Experience will always determine in its favour, under the circumstances to which its use should be restricted. In that insensible state of the stomach which is so often to be observed, where the excited fluids impedes the passage of air into the lungs, the sublimate affords a prompt, safe, and efficacious emetic, and has in our own hands arrested the progress of the patient to the grave, even while he had reached the confines of eternity. One grain dissolved in an ounce of water is usually sufficiently strong, if a tea spoonfull be given every fifteen or twenty minutes till a complete emesis shall have been effected. It often ex=

=cites a soreness in the gums, but scarcely ever a profuse salivation".
Great advantage may be derived from the warm bath, in some instances, where the skin is hot and dry &c. Various external applications to the throat has been resorted to with great advantage, and of these, the spirits of Turpentine appears to be more highly thought of by some; and Prof. Chew thinks it highly preferable to blisters, from the simple fact that blisters are too tardy in their operation &c.
"The action of the Turpentine on the skin is prompt and powerful, and if the derivative powers of such applications be proportionate to the degree of irritation and pain they produce, few can equal it. A piece of flannel may be imbued with the turpentine and applied round the neck. The polygala seneka is a valuable remedy in this disease; and where the inflamatory action has been subdued; before this is accomplished it would be injurious on account of its stimulating qualities. For the removal of the dry and hoarse cough and slight oppression

of the respiration, which in some instances re=
main after the inflammation has been sub=
dued, we find no remedy equal in useful=
ness to the polygala -

I will close my subject by giving a ℞ highly
recommended by Prof. Chew, which I should
not have neglected in its proper place &c -

viz ℞ — Wine of Ipecac - ℥iij
Syrup - Tolu ℥v
Mucc. G. Arabic ℥j

Dose a teaspoonfull every hour &c, This remedy
says that Gentleman is a mild and effica=
cious, and answers as a mild emetic better
than any other he knows; but when the breath=
ing is hard, and foreign matter is present,
it will be found too mild in its operation, and
recourse must be had to those that are more
violent in their effects -

Besides this remedy there is one which Prof.
Potter recommends, and indeed is highly ex=
tolled by those that have ever tried it - viz

℞ Proto. Chlo. Mer - 40 grs
Tart. Ant. 10 grs
Gum Arabic - Sufficency - over -

Dose a teasp Water — ℥ iij

Dose — a teaspoonfull (to a child two years old) every 20 Minutes, and continued untill the cough is suspended — This says he, will succeed 99 cases out of a 100, but before he uses it he premises bleeding &c. &c.

Ant.